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1899-1900

CATALOGUE

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UNIVERSITY OF ILLINOIS

University of Maine

1899-1900



ORONO, MAINE

AUGUSTA, MAINE
KENNEBEC JOURNAL PRINT
1900

"I praise New England because it is the country in the world where is the freest expenditure for education. We have already taken, at the planting of the colonies, (for aught I know for the first time in the world), the initial step, which for its importance might have been resisted as the most radical of revolutions, thus deciding at the start the destiny of this country,—this, namely that the poor man, whom the law does not allow to take an ear of corn when starving, nor a pair of shoes for his freezing feet, is allowed to put his hand into the pocket of the rich, and say, 'You shall educate me, not as you will, but as I will; not alone in the elements, but, by further provision, in the languages, in sciences, in the useful and in the elegant arts.' The child shall be taken up by the state, and taught at the public cost, the rudiments of knowledge, and, at last, the ripest results of art and science."—*Ralph Waldo Emerson.*



WINGATE HALL.

CATALOGUE

OF THE

University of Maine

1899-1900



ORONO, MAINE

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CALENDAR.

FALL TERM, 1899.

September 18, Monday,	Arrearage examinations begin.
September 19, Tuesday,	Entrance examinations begin.
September 20, Wednesday,	Fall term begins.
November 27, Tuesday,	Meeting of the Board of Trustees.
November 29, Wednesday,	} Thanksgiving recess.
December 4, Monday,	
December 8, Friday,	Sophomore prize declamations.
December 21, Thursday,	Christmas recess begins.

1900.

January 2, Tuesday,	Arrearage examinations begin. (Spring term studies).
January 3, Wednesday,	Christmas recess ends.
January 26, Friday,	Fall term ends.

SPRING TERM, 1900.

January 26, Friday,	Entrance examinations begin.
January 29, Monday,	Spring term begins.
February 22, Thursday,	Washington's birthday.
April 11, Wednesday,	Easter recess begins.
April 16, Monday,	Arrearage examinations begin. (Fall term studies).
April 17, Tuesday,	Easter recess ends.
May 18, Friday,	Ivy day.

May	30, Wednesday,	Memorial day.
May	31, Thursday,	Farmers' field day.
May	26, Saturday,	Senior vacation begins.
June	9, Saturday,	Junior exhibition.
June	10, Sunday,	Baccalaureate sermon.
June	11, Monday,	Convocation.
June	11, Monday,	Class day.
June	12, Tuesday,	Meeting of the Board of Trustees.
June	12, Tuesday,	Exhibition drill.
June	12, Tuesday,	Receptions by the fraternities.
June	12, Tuesday,	Reception by the President.
June	13, Wednesday,	COMMENCEMENT.
June	13, Wednesday,	Commencement dinner.
June	13, Wednesday,	Meeting of the Alumni Association.
June	13, Wednesday,	Commencement concert.
June	14, Thursday,	Entrance examinations begin.

FALL TERM, 1900.

September 17, Monday,	Arrearage examinations begin.
September 18, Tuesday,	Entrance examinations begin.
September 19, Wednesday,	Fall term begins.
November 26, Tuesday,	Meeting of the Board of Trustees.
November 28, Wednesday,	} Thanksgiving recess.
December 3, Monday,	
December 7, Friday,	Sophomore prize declamations.
December 20, Thursday,	Christmas recess begins.

1900.

January 2, Wednesday,	Arrearage examinations begin. (Spring term studies).
January 3, Thursday,	Christmas recess ends.
January 25, Friday,	Term ends.

SPRING TERM, 1901.

January	25, Friday,	Entrance examinations begin.
January	28, Monday,	Spring term begins.
June	12, Wednesday,	COMMENCEMENT.

CALENDAR OF THE SCHOOL OF LAW.

1899.

October	4, Wednesday,	Fall term begins.
December	20, Wednesday,	Fall term ends.

1900.

January	10, Wednesday,	Winter term begins.
March	21, Wednesday,	Winter term ends.
March	28, Wednesday,	Spring term begins.
June	13, Wednesday,	COMMENCEMENT.

1900.

October	3, Wednesday,	Fall term begins.
December	19, Wednesday,	Fall term ends.

1901.

January	9, Wednesday,	Winter term begins.
March	20, Wednesday,	Winter term ends.
March	27, Wednesday,	Spring term begins.
June	12, Wednesday,	COMMENCEMENT.

THE UNIVERSITY OF MAINE.

ESTABLISHMENT.

By an act of Congress, approved July 2, 1862, it was provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund "the interest of which shall be inviolably appropriated, by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The Act forbade the use of any portion of the principal or interest of this fund, for the purchase, erection, or maintenance of buildings, and required each state, taking the benefit of the provisions of the Act, "to provide within five years not less than one college" to carry out the purposes of the Act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The Trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right, "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that in addition to the branches specifically required by the Act of Congress, the college should teach such other studies as the facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME.

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public lands, from which the University has realized an endowment fund of \$118,300. This has been increased by a bequest of \$100,000 from Abner Coburn of Skowhegan, who was for many years president of the Board of Trustees. The town of Orono contributed \$8,000, and the town of Oldtown \$3,000, for the purchase of the site on which the buildings stand. The State has appropriated about \$300,000 for the material equipment.

Under an Act of Congress approved March 2, 1887, the University receives \$15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress approved August 30, 1890, the University receives for its more complete endowment and maintenance, \$25,000 annually.

Under an Act of the Legislature, approved March 20, 1897, the University receives \$20,000 annually from the State for current expenses. Student fees and miscellaneous receipts complete the income.

THE BOARD OF TRUSTEES.

HON. HENRY LORD, <i>President</i> ,	Bangor.
HON. WILLIAM THOMAS HAINES, B. S., LL. B.,	
	<i>Secretary</i> , Waterville.
ARTHUR LEE MOORE, B. S.,	Camden.
HON. ELLIOTT WOOD,	Winthrop.
HON. CHARLES PLUMMER ALLEN, B. S.,	Presque Isle.
HON. JOHN ALFRED ROBERTS, M. A.,	Norway.
HON. EDWARD BRACKETT WINSLOW,	Portland.
HON. VORANUS LATHROP COFFIN,	Harrington.

EXECUTIVE COMMITTEE.

TRUSTEES LORD, HAINES, AND ALLEN.

TREASURER.

HON. ISAIAH KIDDER STETSON, B. PH.,	Bangor.
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ADVISORY BOARD FOR THE SCHOOL OF LAW.

HON. CHARLES HAMLIN, M. A., <i>President</i> ,	Bangor.
HON. HENRY BRADSTREET CLEAVES,	Portland.
HON. WILLIAM HENRY FOGLER,	Rockland.
HON. WILLIAM THOMAS HAINES, B. S., LL. B.,	Waterville.
HON. HERBERT MILTON HEATH, M. A.,	Augusta.
HON. ANDREW PETERS WISWELL, B. A.,	Ellsworth.
DEAN GEORGE ENOS GARDNER, M. A., <i>Secretary</i> ,	Bangor.

THE EXPERIMENT STATION COUNCIL.

ARTHUR LEE MOORE, B. S.,.....	Camden.
EDWARD BRACKETT WINSLOW,.....	Portland.
VORANUS LATHROP COFFIN,.....	Harrington.
ABRAM WINEGARDNER HARRIS, SC. D., <i>President</i> ,.....	Orono.
CHARLES DAYTON WOODS, B. S., <i>Secretary</i> ,.....	Orono.
BENJAMIN WALKER MCKEEN,.....	Fryeburg.
OTIS MEADER,	Albion.
CHARLES S POPE,.....	Manchester.
JAMES MONROE BARTLETT, M. S.,.....	Orono.
LUCIUS HERBERT MERRILL, B. S.,.....	Orono.
FRANCIS LEROY HARVEY, PH. D.,.....	Orono.
FREMONT LINCOLN RUSSELL, V. S.,.....	Orono.
WELTON MARKS MUNSON, M. S.,.....	Orono.
GILBERT MOTTIER GOWELL, M. S.,.....	Orono.

THE FACULTY AND OTHER OFFICERS.

-
- ABRAM WINEGARDNER HARRIS, SC. D.,.....Campus.
President.
- MERRITT CALDWELL FERNALD, PH. D.,.....Bennoch Street.
Professor of Philosophy.
- *ALFRED BELLAMY AUBERT, M. S.,.....Campus.
Professor of Chemistry.
- ALLEN ELLINGTON ROGERS, M. A.,.....College Street.
Professor of Political Economy and History,
and Professor of Constitutional Law.
- WALTER FLINT, M. E.,.....College Street.
Professor of Mechanical Engineering.
- JAMES MONROE BARTLETT, M. S.,.....College Street.
Chemist in the Experiment Station.
- LUCIUS HERBERT MERRILL, B. S.,.....Bennoch Street.
Professor of Biological Chemistry, and
Chemist in the Experiment Station.
- FRANCIS LEROY HARVEY, Ph. D.,.....Forest Avenue.
Professor of Natural History, and Entomol-
ogist of the Experiment Station.
- JAMES NORRIS HART, C. E., M. S.,.....Campus.
Professor of Mathematics and Astronomy.
- FREMONT LINCOLN RUSSELL, B. S., V. S.,.....Main Street.
Professor of Biology, and Veterinarian of the
Experiment Station.
- WELTON MARKS MUNSON, M. S.,.....Main Street.
Professor of Horticulture, and Horticulturist of
the Experiment Station.
-

* On leave.

- HORACE MELVYN ESTABROOKE, M. S., M. A.,.....Main Street.
Professor of English.
- JAMES STACY STEVENS, Ph. D.,.....Main Street.
Professor of Physics.
- GILBERT MOTTIER GOWELL, M. S.,.....Campus.
Professor of Animal Industry, and Agriculturist
of the Experiment Station.
- CHARLES DAYTON WOODS, B. S.,.....Main Street.
Professor of Agriculture, and Director of the
Experiment Station.
- NATHAN CLIFFORD GROVER, B. S., C. E.,.....Campus.
Professor of Civil Engineering.
- GEORGE ENOS GARDNER, M. A.,.....Bangor.
Professor of Law, and Dean of the School of Law.
- HOWARD SCOTT WEBB, M. E., E. E.,.....North Main Street.
Professor of Electrical Engineering.
- KARL POMEROY HARRINGTON, M. A.,.....Campus.
Professor of Latin.
- JOHN HOMER HUDDILSTON, Ph. D.,.....Main Street.
Professor of Greek.
-
Professor of Military Science.
- WILBUR FISK JACKMAN, B. S., Ph. C.,.....Mill Street.
Assistant Professor of Pharmacy.
- EDWIN BRYANT NICHOLS, B. A.,.....Campus.
Assistant Professor of Modern Languages.
- GARNETT RYLAND, Ph. D.,.....Campus.
Assistant Professor of Chemistry.
- RALPH KNEELAND JONES, B. S.,.....Main Street.
Librarian.
- PERLEY WALKER, B. M. E.,.....Campus.
Instructor in Mechanical Engineering.
- REGINALD RUSDEN GOODELL, M. A.,.....Main Street.
Instructor in Modern Languages.
- CHARLES PARTRIDGE WESTON, C. E.,.....Campus.
Instructor in Civil Engineering.

- ALLEN ROGERS, B. S.,.....Campus.
Instructor in Chemistry.
- WILLIAM EMANUEL WALZ, M. A., LL. B.,.....Bangor.
Instructor in Law.
- CHARLES HAMLIN, M. A.,.....Bangor.
Lecturer on Insolvency.
- LUCILIUS ALONZO EMERY, M. A., LL. D.,.....Ellsworth.
Lecturer on Roman Law.
- ANDREW PETERS WISWELL, B. A.,.....Ellsworth.
Lecturer on Evidence.
- LOUIS CARVER SOUTHARD, M. S.,.....Boston.
Lecturer on Medical Jurisprudence.
- FOREST JOHN MARTIN, LL. B.,.....Bangor.
Lecturer on Maine Practice.
- HUGO CLARK, C. E.,.....Bangor.
Lecturer on Equity Pleading.
- STANLEY JOHN STEWARD, B. M. E.,.....Mill Street.
Foreman of the Shop.
- LUCIUS JERRY SHEPARD, B. S.,.....Mill Street.
Assistant in Agriculture in the Experiment Station.
- ORA WILLIS KNIGHT, M. S.,.....Bangor.
Assistant Chemist in the Experiment Station.
- ARTHUR ROBERT CRATHORNE, B. S.,.....Campus.
Tutor in Mathematics.
- HERBERT GROVE DORSEY, M. S.,.....Campus.
Tutor in Physics.
- ANDREW JARVIS PATTEN, B. S.,.....Forest Avenue.
Assistant Chemist in the Experiment Station.
- HAROLD HAYWARD CLARK, B. M. E.,.....Main Street.
Tutor in Drawing.
- ARTHUR WELLINGTON PRICE, B. A.,.....Bangor.
Assistant in English.
- CYRENIUS WALTER CROCKETT, B. S.,.....Campus.
Assistant in Chemistry.
- ARCHER LEWIS GROVER, B. M. E.,.....Campus.
Assistant in Electrical Engineering.

- EDWARD RAYMOND MANSFIELD, B. S.,.....Bennoch Street.
Assistant Chemist in the Experiment Station.
- STANLEY SIDENSPARKER, B. M. E.,.....Campus.
Assistant in Physics.
- CLINTON LEANDER SMALL, B. S.,.....Campus.
Assistant in Chemistry.
- WILLIAM AUGUSTINE MURRAY, B. C. E.,.....Campus.
Assistant in Civil Engineering.
- OLIVER OTIS STOVER, B. S.,.....Campus.
Assistant in Natural History.
- EDWIN CARLETON UPTON, B. S.,.....Campus.
Assistant in Modern Languages.
- * GEORGIA THOMAS BURROWS,.....Campus.
Assistant in the Library.
- † THIRSA BURR SANDS.....Campus.
Assistant in the Library.
- ELIZABETH ABBOTT BALENTINE,.....Campus.
Secretary to the President, and Secretary of the
Faculty.

* Until December 31, 1899.

† After January 1, 1900.

ADMISSION.

Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for \$150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one term will be accepted in place of a bond. In the School of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine, and non-residents.

Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they purpose to enter, or in equivalent studies. Certificates will be accepted for the preparatory work, but not for any part of the college work, unless done in a college. A student who has accomplished half of the preparatory course may be examined on that part, and receive credit.

The attention of students preparing for the entrance examinations is called to the need of careful work in mathematics. A good preparation in algebra and geometry is most important for those who expect to enter engineering courses. Schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Persons, not candidates for a degree, who wish to take special studies, will be permitted to do so upon giving evidence of satisfactory preparation. If they subsequently desire to become candidates for a degree, or to take a regular course, they will be required to pass the entrance examinations.

No examinations are required for admission to the short winter courses.

College graduates, who wish to enter a technical course, will be admitted to the junior class without examination. Students in general college courses, who expect to pursue technical courses after graduation, should avail themselves of opportunities

for the study of mathematics, physics, chemistry, and drawing, as a preparation for engineering courses; and of physics, chemistry, and drawing, for chemical and biological courses.

ADMISSION TO THE SCHOOL OF LAW.—Graduates of a college, or of a preparatory school of good standing, will be admitted without examination. Other applicants must give satisfactory evidence of the necessary qualifications. These are fixed in each case on a consideration of its merits.

Students from other law schools of good standing will be admitted to the appropriate classes in this school upon certificate. Students from law offices will be admitted to advanced standing after passing a satisfactory examination upon the earlier subjects of the course. Members of the bar of any state will be admitted to the senior class without examination.

Special students, not candidates for a degree, will be admitted without examination.

ENTRANCE EXAMINATIONS.

Examinations are held at Orono, beginning on the day before the opening of each term, and on the day after commencement. Examinations will be held, if desired, in each county of the State. These examinations are held on the day after commencement, and persons desiring examinations at such places must notify the President not later than June 1.

To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct an examination. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University accompanied by the indorsement of the examiner. Applications for such examinations must be made out on blanks to be obtained from the secretary of the faculty.

Candidates for the CLASSICAL COURSE are examined on—*Language*, English, Latin, Greek, and either French or German; *History*, Roman, Greek; *Mathematics*, Plane Geometry, Algebra.

Candidates for the LATIN-SCIENTIFIC COURSE are examined on—*Language*, English, Latin, and either French or German; *History*, Roman; *Mathematics*, Plane Geometry, Algebra.

Candidates for the SCIENTIFIC COURSE are examined on—*Language*, English, and one year of a foreign language, either ancient or modern; *History*, One of the following,—General, Roman, Greek, English; *Mathematics*, Plane Geometry, Alge-

bra; *Science*, Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the CHEMICAL, AGRICULTURAL (four years), PREPARATORY MEDICAL, AND PHARMACY (four years) COURSES are examined on—*Language*, English, and one year of a foreign language, either ancient or modern; *Mathematics*, Plane Geometry, Algebra; *Science*, Two of the following,—Botany, Chemistry Physical Geography, Physics.

Candidates for the CIVIL ENGINEERING, MECHANICAL ENGINEERING, and ELECTRICAL ENGINEERING COURSES are examined on—*Language*, English, and one year of a foreign language, either ancient or modern; *Mathematics*, Plane and Solid Geometry, Algebra; *Science*, Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for SHORT COURSES IN AGRICULTURE (one year or more) are examined on—*Elementary Subjects*, Arithmetic, English Grammar, Physiology; *Language*, English; *History*, United States; *Mathematics*, Algebra through simple equations of the first degree; *Science*, One of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on—*Elementary Subjects*, Descriptive Geography, Arithmetic, English Grammar, Physiology; *History*, United States; *Mathematics*, Algebra through simple equations of the first degree.

SUBSTITUTES.—One year of Latin will be accepted as a substitute for one of the following groups: (a) Geography, Arithmetic, English Grammar, Physiology; (b) French or German; (c) One science.

One year of French or German will be accepted as a substitute for one of the following groups: (a) Geography, Arithmetic, English Grammar, Physiology; (b) One science.

Other equivalents will be accepted for any of the requirements except Mathematics, Latin, or Greek.

In consideration of the recent addition of one year of a foreign language, and of solid geometry, to the requirements, students who are not able to offer these subjects, but are otherwise prepared, will be admitted without them, and allowed to make them up after admission. This privilege will be withdrawn after 1902.

ENTRANCE REQUIREMENTS.

The stars indicate the studies required.

For requirements of the School of Law see page 94.

COLLEGE OF	ARTS AND SCIENCES					AGRICUL- TURE	ENGINEER- ING			PHAR- MACY		
COURSE	Classical	Latin Scientific	Scientific	Chemical	Preparatory Medical	Four years	Special	Civil	Mechanical	Electrical	Four years	Two years
<i>Language:</i>												
English	*	*	*	*	*	*	* <i>b</i>	*	*	*	*	* <i>b</i>
French	* <i>c</i>	* <i>c</i>	}* <i>d</i>	* <i>d</i>	* <i>d</i>	* <i>d</i>	* <i>d</i>	* <i>d</i>	* <i>d</i>	* <i>d</i>	...
German												
Latin												
Greek .....	*	.....									
<i>History:</i>												
United States.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*
General	}* <i>e</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roman	*	*										
Greek .....	*	.....									
English .....	.....	.....								
<i>Mathematics:</i>												
Plane Geometry....	*	*	*	*	*	*	.....	*	*	*	*	.....
Solid Geometry	* <i>f</i>	* <i>f</i>	* <i>f</i>	.....	.....
Algebra	*	*	*	*	*	*	* <i>g</i>	*	*	*	*	* <i>g</i>
<i>Science: a</i>												
Botany	}	* <i>h</i>	* <i>h</i>	* <i>h</i>	* <i>h</i>	* <i>i</i>	* <i>h</i>	* <i>h</i>	* <i>h</i>	* <i>h</i>	.....
Chemistry												
Physical Geog....												
Physics												
<i>Elementary: a</i>												
Geography .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*
Arithmetic .....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*
Physiology .....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*

a—One year of a foreign language, ancient or modern, will be accepted as a substitute for all the elementary studies, or for one science. *b*—English grammar only. *c*—One year of French or German. *d*—One year of a foreign language, either ancient or modern. In consideration of the recent addition of this requirement, candidates who cannot satisfy it, but are otherwise well prepared, will be allowed to make it up as an extra study after admission. This privilege will be discontinued after 1902. *e*—One from general, Roman, Greek, or English history. *f*—See page 19. *g*—Through simple equations of the first degree only. *h*—Two sciences, from the list of four, are required. *i*—One science, from the list of four, is required.

ENTRANCE REQUIREMENTS.

The following statements will show in detail the requirements in each subject.

LANGUAGE.

ENGLISH.—*Grammar.* The usual school course. Attention should be given to punctuation and the use of capital letters.

Reading and Practice. Each candidate will be required to present evidence of a general knowledge of the substance of the books mentioned below and to answer simple questions on the lives of their authors. The examination will usually be the writing of one or two paragraphs on each of several topics. The treatment of these topics is designed to test the power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of this test, the candidate may present an exercise book, certified by his instructor, containing compositions or other written work done in connection with the reading of the books.

In 1900, this part of the examination will be based upon: Dryden's *Palamon and Arcite*; Pope's *Iliad*, books I, VI, XXII, and XXIV; the *Sir Roger de Coverley Papers* in the *Spectator*; Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; De Quincey's *The Flight of a Tartar Tribe*; Cooper's *The Last of the Mohicans*; Tennyson's *The Princess*; Lowell's *The Vision of Sir Launfal*.

In 1901 and 1902, it will be based upon: Shakespeare's *Merchant of Venice*; Pope's *Iliad*, books I, VI, XXII, and XXIV; the *Sir Roger de Coverley Papers* in the *Spectator*; Goldsmith's *The Vicar of Wakefield*; Coleridge's *The Ancient Mariner*; Scott's *Ivanhoe*; Cooper's *The Last of the Mohicans*; Tennyson's *The Princess*; Lowell's *The Vision of Sir Launfal*; George Eliot's *Silas Marner*.

In 1903, 1904, and 1905, it will be based upon: Shakespeare's *Merchant of Venice* and *Julius Caesar*; the *Sir Roger de Coverley Papers* in the *Spectator*; Goldsmith's *Vicar of Wakefield*; Coleridge's *Ancient Mariner*; Scott's *Ivanhoe*; Carlyle's *Essay on Burns*; Tennyson's *Princess*; Lowell's *Vision of Sir Launfal*; George Eliot's *Silas Marner*.

Study and Practice. This part of the examination presupposes a careful study of the works named below. The examination will be upon subject-matter, form, and structure; and will also test the candidate's ability to express his knowledge with clearness and accuracy.

In 1900, this part of the examination will be based upon: Shakespeare's *Macbeth*; Milton's *Paradise Lost*, books I and II; Burke's *Speech on Conciliation with America*; Macaulay's *Essays on Milton and Addison*.

In 1901 and 1902, it will be based upon: Shakespeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*; Burke's *Speech on Conciliation with America*; Macaulay's *Essays on Milton and Addison*.

In 1903, 1904, and 1905, it will be based upon: Shakespeare's *Macbeth*; Milton's *Lycidas*, *Comus*, *L'Allegro*, and *Il Penseroso*; Burke's *Speech on Conciliation with America*; Macaulay's *Essays on Milton and on Addison*.

FRENCH.—The candidate offering French must have an accurate knowledge of the grammar, especially of the regular and irregular verbs; an elementary knowledge of French composition; the ability to read at sight moderately difficult French prose.

GERMAN.—The candidate offering German must have an accurate knowledge of the grammar; an elementary knowledge of German composition; the ability to read at sight moderately difficult German prose.

LATIN.—The grammar, including prosody; Cæsar's *Gaulic War*, books I-IV; Cicero's four orations against Catiline, and those for Archias and for the Manilian Law; Vergil's *Eclogues* and the *Æneid*, books I-VI; the sight translation of Latin passages of moderate difficulty; translation into Latin of simple English sentences, and easy narrative passages based on the prose authors read. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted for those prescribed.

GREEK.—The grammar, including prosody; Xenophon's *Anabasis*, books I-IV; Homer's *Iliad*, books I-II; the sight translation of easy passages from Xenophon; the translation into Greek of

easy passages based on the required books of the Anabasis. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted.

HISTORY.

GENERAL HISTORY.—A knowledge such as may be obtained from Myers's General History.

ROMAN HISTORY.—A knowledge such as may be obtained from Allen's Short History of the Roman People, to the death of Marcus Aurelius.

GREEK HISTORY.—Pennell's, or Myers's History of Greece, to the capture of Corinth, 146 B. C.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery's History of England.

UNITED STATES HISTORY.—A knowledge such as may be obtained from Higginson's History of the United States.

MATHEMATICS.

PLANE GEOMETRY.—The first five books of Wells's, or Wentworth's Geometry, or an equivalent. Numerical exercises, original propositions, and the neat and careful construction of figures should not be neglected. The examination will include some original propositions for demonstration or construction.

SOLID GEOMETRY.—Books VI-IX of Wells's, or books VI-VIII of Wentworth's Geometry, or an equivalent. The examination will be planned to test the candidate's ability to apply the theorems to the computation of surfaces and volumes, as well as readiness in demonstration. Required only of candidates for the engineering courses.

As this is a new requirement, and is not taught in all preparatory schools, students who cannot offer it, but are otherwise well prepared, will be allowed to take it as an extra study after admission. This privilege will be withdrawn after 1902.

ALGEBRA.—The elements, equations of the first degree, radicals, quadratic equations, arithmetical and geometrical progression. Candidates for special courses in agriculture or for the short course in pharmacy will be examined on no topics beyond

simple equations of the first degree. A satisfactory preparation may be obtained from Greenleaf's Elementary, Newcomb's, Wells's Academic, or Wentworth's School Algebra.

SCIENCE.

BOTANY.—An elementary course which will bring the student into contact with plants. Gray's Lessons in Botany, Spaulding's Introduction to Botany, or Bergen's Elements of Botany, will serve as a satisfactory guide.

CHEMISTRY.—The necessary ground is covered by the following text-books: Fisher, Remsen, Roscoe (inorganic part), Shepard, Storer and Lindsay, Williams.

PHYSICAL GEOGRAPHY.—A satisfactory preparation may be obtained from Appleton's Physical Geography.

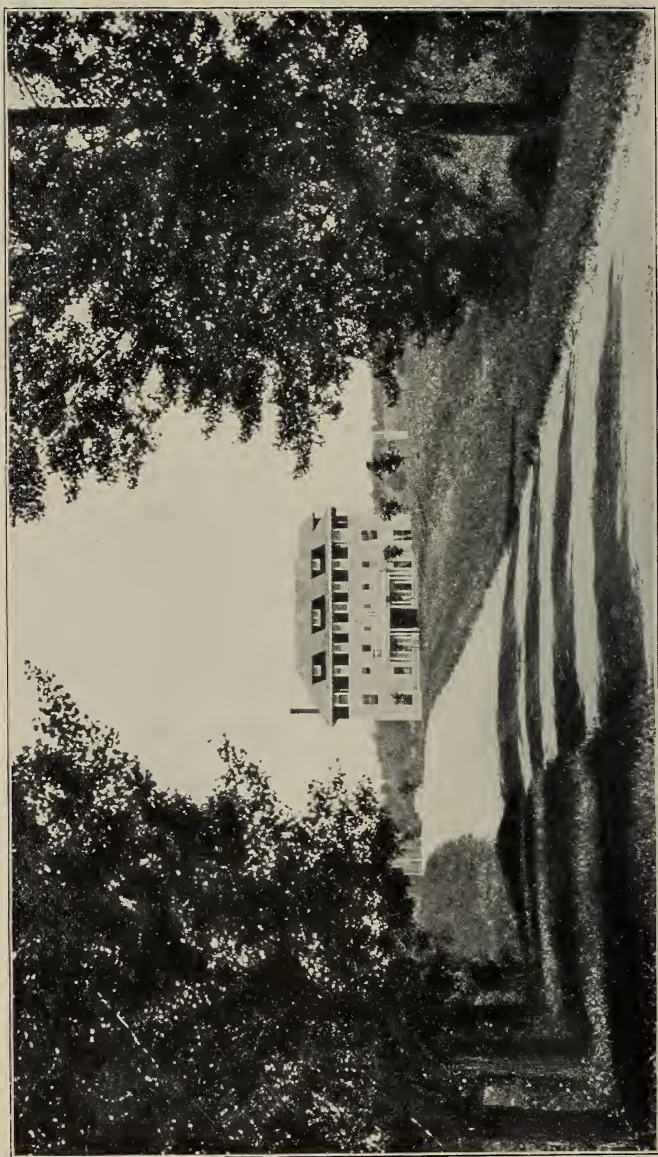
PHYSICS.—A satisfactory treatment of this subject may be found in Avery's, Gage's or Cooley's Physics.

ELEMENTARY SUBJECTS.

DESCRIPTIVE GEOGRAPHY.—The usual school course. Required for short course in pharmacy only.

ARITHMETIC.—The usual school course, including the metric system of weights and measures. Required for the short courses only.

PHYSIOLOGY.—Cells and tissues, skeleton, muscles, blood and circulation, respiration, nutrition and digestion, lymphatic system, excretory organs, nervous system, special senses, hygiene. Required for the short courses only.



PHI GAMMA DELTA FRATERNITY HOUSE.

CERTIFICATES OF FITNESS.

Any preparatory school whose course of instruction covers in a satisfactory manner the requirements for admission may be placed upon the list of approved schools. Application for such approval should be made to the President of the University, and must be accompanied by a detailed statement of the course of study.

Certificates for admission to the freshman class are accepted from graduates of approved schools, but will not be accepted from non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

APPROVED SCHOOLS.

Principal.

Athol (Mass.) High School,	F. C. Avery.
Bangor High School,	Henry K. White, M. A.
Bar Harbor High School,	Prescott Keyes, Jr., B. C. E.
Bath High School,	H. E. Cole, M. A.
Belfast High School,	W. R. Howard, B. S.
Berwick Academy, <i>South Berwick</i> ,	F. Stanley Stebbins, B. A.
Biddeford High School,	Harry H. Burnham, M. A.
Bowdoinham High School,	R. F. Springer.
Boynton High School, <i>Eastport</i> ,	Everett L. Getchell, B. A.
Brewer High School,	Harlan M. Bisbee, B. A.
Bridge Academy, <i>Dresden Mills</i> ,	Alonzo A. Morelen, B. A.
Bridgton Academy, <i>North Bridgton</i> ,	C. C. Spratt, B. A.
Bridgton High School,	J. E. Connor, B. A.

Bristol Academy, <i>Taunton, Mass.</i> ,	Alfred Bowman Maggs, M. A.
Brunswick High School,	Charles Fish, M. A.
Calais High School,	Verne M. Whitman, M. A.
Caribou High School,	Bernard W. Owen, B. A.
Cherryfield Academy,	Benjamin Coffin, B. A.
Coburn Classical Institute, <i>Waterville</i> ,	F. W. Johnson, M. A.
Cony High School, <i>Augusta</i> ,	C. F. Cook, B. A.
Cornish High School,	Stephen Rounds.
Corinna Union Academy,	William F. Miner, B. A.
Danforth High School,	Varney A. Putnam.
Deering High School,	William M. Marvin, B. A.
Dexter High School,	W. S. Brown, B. A.
Dover English High School,	W. J. Rideout.
East Corinth Academy,	A. L. Dennison, B. A.
East Maine Conference Seminary, <i>Bucksport</i> ,	J. F. Haley, M. A.
Edward Little High School, <i>Auburn</i> ,	J. F. Moody, M. A.
Ellsworth High School,	Ernest H. Pratt, M. A.
English High School, <i>Boston, Mass.</i> ,	John F. Casey, M. A.
Farmington High School,	Charles M. Pennell, B. A.
Fort Fairfield High School,	William L. Bonney, M. A.
Foxcroft Academy,	Lyman K. Lee, B. A.
Framingham (Mass.) Academy and High School,	John H. Parsons, M. A.
Freeport High School,	Will O. Hersey, B. A.
Gardiner High School,	William L. Powers, M. A.
George Stevens-Bluehill Academy, <i>Bluehill</i> ,	Charles W. Cutts, B. A.
Gould's Academy, <i>Bethel</i> ,	F. E. Hanscom, M. A.
Greeley Institute, <i>Cumberland Center</i> ,	Everett Peacock, B. A.
Guilford High School,	George W. Snow, M. A.
Hallowell High School,	Herbert W. Dutch, B. A.
Hampden Academy,	J. F. Philbrook, B. A.

Hebron Academy,	W. E. Sargent, M. A.
Higgins Classical Institute, <i>Charleston</i> ,	H. Warren Foss, B. A.
Island Falls High School,	Sans Lorenzo Merriman, B. A.
Leavitt Institute and Training School, <i>Turner Center</i> ,	Leland A. Ross, B. A.
Lewiston High School,	G. H. Libby, B. A.
Limington Academy,	Charles L. Orton, B. A.
Lincoln Academy, <i>Newcastle</i> ,	George H. Larrabee, M. A.
Lisbon High School,	Abner T. Hinckley, B. A.
Lubec High School,	Frank P. Wagg.
Machias High School,	D. Lyman Wormwood, B. A.
Madison High School,	Edward M. Tucker, B. A.
Maine Central Institute, <i>Pittsfield</i> ,	O. H. Drake, M. A.
Maine Wesleyan Seminary and Female College,	Henry E. Trefethen, M. A.
Milo High School,	Ernest E. Morse, B. A.
Monmouth Academy,	W. S. Masterman.
Monson Academy,	W. S. Knowlton, M. A.
North Brookfield (Mass.) High School,	C. L. Judkins, B. A.
North Yarmouth Academy, <i>Yarmouth</i> ,	Rev. B. P. Snow, M. A.
Norway High School,	Albert M. Rollins, B. A.
Oakland High School,	F. L. Tapley.
Oldtown High School,	Harry T. Watkins, B. A.
Orono High School,	S. H. Powell, M. A.
Orange (Mass.) High School,	Charles L. Simmons.
Palmer (Mass.) High School,	Alfred C. Thompson, B. A.
Parsonsfield Seminary and Piper High School,	Elden D. Pratt, M. A.
<i>North Parsonsfield</i> ,	H. N. Gardner, B. A.
Patten Academy,	C. W. Pierce, M. A.
Pennell Institute, <i>Gray</i> ,	Hugh Pendexter.
Phillips High School,	William Harthorne.
Phillips Limerick Academy, <i>Limerick</i> ,	

Portland High School,	Albro E. Chase, B. A.
Plymouth (Mass.) High School,	Agnes W. Lindsey.
Richmond High School,	E. C. Megguire, M. A.
Ricker Classical Institute, <i>Houlton</i> ,	Arthur M. Thomas, M. A.
Rockland High School,	L. E. Moulton, B. A.
Rumford Falls High School,	Charles W. Cary.
Skowhegan High School and Bloomfield Academy, <i>Skowhegan</i> ,	F. G. Farrington, B. A.
South Paris High School,	L. P. Gerrish, B. A.
South Portland High School,	Ralph A. Parker, B. A.
Thomaston High School,	Albert S. Cole, B. A.
Thornton Academy, <i>Saco</i> ,	Edwin P. Sampson, M. A.
Topsham High School,	John A. Cone, B. A.
Warren High School,	F. E. Russell, M. A.
Washington Academy, <i>E. Machias</i> ,	A. Sherman Harriman, B. A.
Waterville High School,	J. E. Nelson.
Westbrook High School,	Fred W. Freeman, M. A.
Westbrook Seminary, <i>Deering</i> .	O. H. Perry, B. A.
Wilton Academy,	Drew T. Harthorn, M. A.
Yarmouth High School,	Herbert M. Moore, B. A.

DEPARTMENTS OF INSTRUCTION.

ENGLISH.

PROFESSOR ESTABROOKE; MR. PRICE.

Eh 1. DECLAMATIONS.—In the freshman year six declamations are required—three in the fall, and three in the spring. In the sophomore and junior years, five are required each year—three in the fall, and two in the spring. PROFESSOR ESTABROOKE; MR. PRICE.

Eh 2. THEMES.—In the sophomore year five themes, historical in subject, and each containing from 1,000 to 1,200 words, are required. In the junior year five themes are required, and in the senior year, two themes or debates. PROFESSOR ESTABROOKE; MR. PRICE.

Eh 3. RHETORIC.—The classification of sentences; analysis of the sentence with reference to punctuation, clearness, strength, and unity; exercises in punctuation; diction, with special reference to purity, propriety, and precision of language; the paragraph; themes, including the narrowing of the subject, construction of outline, etc.; frequent exercises in extemporaneous writing; formal essays.

The text-book is Genung's Outlines of Rhetoric. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 4. RHETORIC.—Extended study of narration and description, argumentative composition, and persuasion; construction of analytical outlines of selections from Burke, Webster, Macaulay, and others; practice in different kinds of composition; exercises in extemporaneous writing.

The text-book is A. S. Hill's Principles of Rhetoric. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

Eh 5. ANGLO-SAXON.—Elements of Anglo-Saxon grammar; reading of easy prose and poetry. Constant reference is made to the relation of Anglo-Saxon to modern English.

The text-book is Smith's Old English Grammar. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

Eh 8. ENGLISH LITERATURE.—The text-book, Pancoast's Introduction to English Literature, is supplemented by frequent lectures, and by study in the library. A few masterpieces are studied in detail. Attention is given to historical and social conditions, and the students are required to prepare essays upon the characters and times studied. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 9. ENGLISH LITERATURE.—A continuation of course 8. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

Eh 10. ENGLISH LITERATURE.—In this course particular attention is paid to the development of the English novel and to the Lake poets. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 11. ENGLISH LITERATURE.—A continuation of course 10, including a study of the most important American authors of the present century. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

MODERN LANGUAGES.

ASSISTANT PROFESSOR NICHOLS; MR. GOODELL; MR. UPTON.

M1 19. FRENCH.—An elementary course enabling the student to acquire the essentials of the grammar, and the ability to read moderately easy prose.

The text-books are: Grandgent, Short French Grammar; Super, French Reader; Labiche et Martin, La Poudre aux yeux; Dumas père, La Tulipe noire; About, Le Roi des montagnes; Mérimée, Colomba. *Two hours a week.* Fall term. MR. GOODELL.

MI 20. FRENCH.—A continuation of course 19. *Two hours a week.* Spring term. MR. GOODELL.

MI 21. FRENCH.—Augier, *Le Gendre de M. Poirier*; Daudet, *Choix d'extraits*; Balzac, *Le Curé de Tours*; Coppée, *Le Pater*; Thiers, *L'Expédition de Bonaparte en Égypte*; Hugo, *Quatre-vingt-treize*; Francois, French Composition. *Two hours a week.* Fall term. MR. GOODELL.

MI 22. FRENCH.—A continuation of course 21. *Two hours a week.* Spring term. MR. GOODELL.

MI 1. FRENCH.—This course is equivalent to courses 19 and 20. *Four hours a week.* Fall term. MR. GOODELL.

MI 2. FRENCH.—This course is equivalent to courses 21 and 22. *Four hours a week.* Spring term. MR. GOODELL.

MI 3. FRENCH.—Crane, *Le Romantisme français*; Dumas fils, *La Question d'argent*; Zola, *La Débâcle*; Daudet, *Morceaux choisis*; Fasnacht, French Composition. *Five hours a fortnight.* Fall term. MR. GOODELL.

MI 4. FRENCH.—A continuation of course 3. *Five hours a fortnight.* Spring term. MR. GOODELL.

MI 15. FRENCH LITERATURE.—French literature of the sixteenth and seventeenth centuries. The more important authors will be read. Lectures. Collateral readings and composition. Elective for those who have completed course 4. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR NICHOLS.

MI 16. FRENCH LITERATURE.—A continuation of course 15. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR NICHOLS.

MI 17. FRENCH LITERATURE.—French Literature of the eighteenth and nineteenth centuries. The more important authors will be read. Lectures. Collateral readings and com-

position. Elective for those who have completed course 4. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR NICHOLS.

MI 18. FRENCH LITERATURE.—A continuation of course 17. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR NICHOLS.

MI 13. OLD FRENCH.—Paris, Extraits de la Chanson de Roland; Constans, Chrestomathie de l'ancien français. Lectures. Assigned readings and essays required. *Five hours a fortnight.* Fall term. PROFESSOR NICHOLS.

MI 14. OLD FRENCH.—A continuation of course 13. *Five hours a fortnight.* Spring term. PROFESSOR NICHOLS.

MI 9. SPANISH.—This course is designed to give a reading knowledge of Spanish. Elective for those who have completed course 2.

The text-books are: Edgren, Spanish Grammar; Ramsey, Spanish Reader; José de Larras, Partir á Tiempo; Breton de los Herreros, La Independencia; Galdós, Doña Perfecta. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR NICHOLS.

MI 10. SPANISH.—A continuation of course 9. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR NICHOLS.

MI 11. ITALIAN.—This course is designed to give a reading knowledge of Italian. Elective for those who have completed course 2.

The text-books are: Grandgent, Italian Grammar; De Amicis, Cuore; Goldoni, Un curioso Accidente; Manzoni, I promessi Sposi. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR NICHOLS.

MI 12. ITALIAN.—A continuation of course 11. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR NICHOLS.

MI 23. GERMAN.—An introductory course covering the elements of the grammar, and moderately easy prose reading.

The text-books are: Harris, German Lessons; Guerber, Märchen und Erzählungen; Heyse, L'Arrabbiata; Storm, Immensee; Hauff, Das kalte Herz; Baumbach, Die Nonne; Hatfield, Materials for German Composition. *Two hours a week.* Fall term. PROFESSOR NICHOLS; PROFESSOR HUDDILSTON.

MI 24. GERMAN.—A continuation of course 23. *Two hours a week.* Spring term. PROFESSOR NICHOLS; PROFESSOR HUDDILSTON.

MI 25. GERMAN.—Schiller, Wilhelm Tell; Lessing, Minna von Barnhelm; Keller, Bilder aus der deutschen Litteratur; Brandt and Day, German Scientific Readings; Freytag, Aus dem Jahrhundert des grossen Krieges. *Two hours a week.* Fall term. PROFESSOR NICHOLS.

MI 26. GERMAN.—A continuation of course 25. *Two hours a week.* Spring term. PROFESSOR NICHOLS.

MI 5. GERMAN.—This course is equivalent to courses 23 and 24. *Four hours a week.* Fall term. PROFESSOR NICHOLS.

MI 6. GERMAN.—This course is equivalent to courses 25 and 26. *Four hours a week.* Spring term. PROFESSOR NICHOLS.

MI 7. GERMAN.—Lessing, Emilia Galotti; Schiller, Maria Stuart; Goethe, Faust; Helmholz, Goethe's naturwissenschaftliche Arbeiten. *Five hours a fortnight.* Fall term. MR. GOODELL.

MI 8. GERMAN.—A continuation of course 7. *Five hours a fortnight.* Spring term. MR. GOODELL.

MI 27. GERMAN.—This course is equivalent to course 6. *Four hours a week.* Fall term. PROFESSOR NICHOLS.

MI 28. GERMAN.—This course is equivalent to courses 7 and 8. *Four hours a week.* Fall term. MR. GOODELL.

LATIN.

PROFESSOR HARRINGTON.

Lt 1. LIVY AND CICERO.—Livy, History of Rome, Books XXI and XXII; Cicero, De Senectute; Latin composition based upon the authors read. *Four hours a week.* Fall term.

Lt 2. HORACE.—Selections from the Satires, Epistles, Epodes and Odes; classical mythology. *Four hours a week.* Spring term.

Lt 3. PLAUTUS AND TERENCE.—The Captivi, Trinummus, or Menæchmi of Plautus; the Andria, Adelphæ, or Phormio of Terence; lectures on the development of Roman comedy. *Five hours a fortnight.* Fall term.

Lt 4. CICERO AND TACITUS.—Selected letters of Cicero; the Agricola and Germania of Tacitus. *Five hours a fortnight.* Spring term.

Lt 5. PLINY AND TACITUS.—Selected letters of Pliny, the younger; readings in the Annals of Tacitus; studies in Silver Latinity. *Five hours a fortnight.* Given in the fall term of odd years.

Lt 6. ROMAN LYRIC POETRY.—Selections from Catullus, Horace, and the Latin hymns of the Christian church; original research. *Five hours a fortnight.* Given in the spring term of even years.

Lt 7. THE ROMAN ELEGIAC POETS.—Selections from Catullus, Tibullus, Propertius, and Ovid; original research. *Five hours a fortnight.* Given in the fall term of even years.

Lt 8. THE ROMAN ELEGIAC POETS.—A continuation of course 7. *Five hours a fortnight.* Given in the spring term of odd years.

Lt 9. ROMAN SATIRE.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius; original research. *Five hours a fortnight.* Given in the fall term of odd years.

Lt 10. ROMAN SATIRE.—A continuation of course 9. *Five hours a fortnight.* Given in the spring term of even years.

Lt 11. ROMAN PHILOSOPHY.—Lucretius (selections); Cicero (selections from the *Academica*, *De Officiis*, *Tusculan Disputations*, *De Finibus*, *De Natura Deorum*); Seneca (*De Providentia*, *De Vita Beata*); lectures on the history and development of ancient philosophy; original research. *Five hours a fortnight.* Given in the fall term of even years.

Lt 12. ROMAN PHILOSOPHY.—A continuation of course 11. *Five hours a fortnight.* Given in the spring term of odd years.

Lt 13. ROMAN LITERATURE.—General introduction to the subject; illustrative class-room readings; a choice of one of five courses of collateral reading of Roman authors. *Five hours a fortnight.* Given in the fall term of even years.

Lt 14. ROMAN LITERATURE.—A continuation of course 13. *Five hours a week.* Given in the spring term of odd years.

Lt 15. ROMAN RHETORIC AND ORATORY.—Quintilian (selections from the *Institutes of Oratory*); Tacitus (*Dialogus de Oratoribus*); Cicero (selections from the *Brutus*, *De Oratore*, *Orator*); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. *Five hours a fortnight.* Given in the fall term of odd years.

Lt 16. ROMAN RHETORIC AND ORATORY.—A continuation of course 15. *Five hours a fortnight.* Given in the spring term of even years.

Lt 17. ROMAN TOPOGRAPHY.—Lectures on the development of the city of Rome and the present condition of its ancient ruins, preceded by a glance at the geography of the Italian peninsula. Illustrated by maps, photographs, and stereopticon views. *One hour a week.* Given in the fall term of even years.

Lt 18. ROMAN PRIVATE LIFE.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. *One hour a week.* Given in the spring term of odd years.

Lt 19. LATIN WRITING.—Advanced exercises in the translation of English into Latin with special reference to style. *One hour a week.* Given in the fall term of odd years.

Lt 20. ROMAN EPIGRAPHY.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring term of even years.

GREEK.

PROFESSOR HUDDILSTON.

Gk 1. XENOPHON.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing, based upon the text. *Four hours a week.* Fall term.

Gk 2. HOMER.—Odyssey, Books VI-X, and XII. The reading of the remaining books, in English translation, is required; assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring term.

Gk 3. ATTIC ORATORS.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Five hours a fortnight.* Fall term.

Gk 4. GREEK TRAGEDY.—Euripides's Medea and Sophocles's Œdipus Rex; required reading on the history of the Greek tragic drama. *Five hours a fortnight.* Spring term.

Gk 5. THUCYDIDES.—Book I. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Five hours a fortnight.* Fall term. Open to those who have taken courses 1 and 3.

Gk 6. ARISTOPHANES.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. *Five hours a fortnight.* Spring term. Open to students who have taken courses 2 and 4.

Gk 7. PLATO.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. *Five hours a fortnight.* Fall term. Open to those who have taken courses 3 and 5.

Gk 8. PINDAR.—The Olympian and Pythian Odes; parallel reading on the history of Greek lyric poetry. *Five hours a fortnight.* Spring term.

Gk 9. GREEK SCULPTURE.—Lectures, illustrated by photographs and lantern slides. This course does not presuppose a knowledge of Greek, and is intended to serve as a general introduction to Greek fine arts. The interdependence of the arts and their relation to the life of the Greeks, as well as their relation to the world's subsequent art, receives considerable attention. *Five hours a fortnight.* Given in the fall term of odd years. Open to all students in the University.

Gk 10. GREEK SCULPTURE.—A continuation of course 9 with a more particular study of Greek architecture. *Five hours a fortnight.* Given in the spring term of even years.

Gk 11. NEW TESTAMENT GREEK.—This course is intended for those who have no acquaintance with ancient languages, and, with course 12, is expected to give considerable facility in reading the narrative portions of the Greek Testament. It neither takes the place of preparatory Greek, nor counts toward a degree in the Classical course. It is open to all students except freshmen. *Five hours a fortnight.* Fall term.

Gk 12. NEW TESTAMENT GREEK.—A continuation of course 11. Reading of the Gospels of John and Matthew; syntax. *Five hours a fortnight.* Spring term.

Gk 13. GREEK PRIVATE LIFE.—Lectures, illustrated with lantern slides and photographs. *Five hours a fortnight.* Fall term. Open to all students in the University.

PHILOSOPHY.

PROFESSOR FERNALD.

Pl 1. PSYCHOLOGY.—Among the topics considered are sensation, structure and functions of the brain, conditions of neural activity, consciousness, attention, conception, discrimination, association, memory, imagination, perception, reasoning, instinct, emotions and sentiments, will as volition, will as choice, and will in relation to character.

The text-book is James's Psychology (Briefer Course.) *Five hours a fortnight.* Fall term.

Pl 2. LOGIC.—The object of this course is to give the student a just appreciation of the functions of language as a means of expressing thought, and a familiarity with the principles of deductive and inductive reasoning. The student is given frequent drills in the application of logical principles.

The text-book is Ryland's Logic. *Five hours a fortnight.* Spring term.

Pl 3. HISTORY OF PHILOSOPHY.—The text-book is Weber's History of Philosophy. *Five hours a fortnight.* Fall term.
PROFESSOR ROGERS.

Pl 4. PEDAGOGY.—The principles of psychology applied to the art of teaching. The order in which the several powers of the mind become active, their relative activity and development at successive school periods. The principles and methods of teaching; oral instruction and the study of books; the recitation, its objects and methods; methods of testing, by questions, by topics; examinations; psychical facts applied to moral training. *Five hours a fortnight.* Fall term.

Pl 5. COMPARATIVE PSYCHOLOGY. The psychology of man and the higher animals compared. A study of other minds than ours with reference to sense-experience, instinct and intelli-

gence, association of ideas, memory, perception of relations, the power to reason, and the emotions. *Five hours a fortnight.* Offered in the spring term of even years. Open to juniors and seniors.

Pl 6. PSYCHOLOGY, ADVANCED COURSE.—Besides special topics in general psychology, this course is designed to include a discussion of such phenomena as sleep and dreams, the hypnotic state, thought transference, illusions and hallucinations. *Five hours a fortnight.* Offered in the spring term of odd years. Open to juniors and seniors.

CIVICS AND HISTORY.

PROFESSOR ROGERS.

Cv 1. GENERAL HISTORY.—The text-book is Schwill's History of Modern Europe. *Five hours a fortnight.* Spring term.

Cv 2. ENGLISH HISTORY.—The text-book is Green's Shorter History of the English People. *Five hours a fortnight.* Spring term.

Cv 3. AMERICAN HISTORY.—Lectures, supplemented by topical investigation and study.

The text-book is Burgess's Middle Period. *Two hours a week.* Spring term.

Cv 4. THE PHILOSOPHY OF HISTORY.—The literature, learning, political and economic conditions of the great historic nations, and the growth of their institutions.

The text-book, Duruy's History of the Middle Ages, is supplemented by lectures and topical studies. *Five hours a fortnight.* Given in the fall term of even years.

Cv 13. POLITICAL ECONOMY.—Instruction is given by lectures. Topical readings and investigations are required. *Five hours a fortnight.* Fall term.

Cv 14. POLITICAL ECONOMY.—A continuation of course 13. *Five hours a fortnight.* Spring term.

Cv 15. CONSTITUTIONAL LAW AND HISTORY.—An outline of Anglo-Saxon institutions, the development of the English Constitution, the growth and political conditions of the American colonies, the Articles of Confederation, the adoption of the Constitution, and the comparative study of the Federal and the State Constitutions from the historical and legal standpoints.

The text-book is Rogers's *Our System of Government*. *Five hours a fortnight*. Fall term.

Cv 16. CONSTITUTIONAL LAW AND HISTORY.—A continuation of course 15. *Five hours a fortnight*. Spring term.

Cv 10. MUNICIPAL LAW.—Lectures on the general principles of contracts, sales, notes, bills, conveyancing, agency, bailments, and insurance. *One hour a week*. Spring term.

Cv 11. INTERNATIONAL LAW.—The text-book is Lawrence's *International Law*. *Five hours a fortnight*. Given in the fall term of odd years.

Cv 12. LIBRARY WORK.—The aim of this work is to familiarize the student with the literature of history and economics and to teach him to make critical and independent investigation of questions connected with these subjects. † *Five hours a fortnight*. Spring term.

LAW.

Lw 1. CONTRACTS.—The text-book is Huffcut and Woodruff's *Cases on Contract*. *Four hours a week*. Fall term. PROFESSOR GARDNER.

Lw 2. CONTRACTS.—A continuation of course 1. *Four hours a week*. Winter term. PROFESSOR GARDNER.

Lw 3. TORTS.—The text-book is Ames and Smith's *Cases on Torts*. *Four hours a week*. Fall term. MR. WALZ.

- LW 4. TORTS.—A continuation of course 3.
Three hours a week. Winter term. MR. WALZ.
- LW 5. TORTS.—A continuation of course 4.
Two hours a week. Spring term. MR. WALZ.
- LW 6. HISTORY AND ELEMENTS OF LAW.—Lectures.
One hour a week. Fall term. PROFESSOR ROGERS.
- LW 7. REAL PROPERTY.—The text-book is Tiedeman on Real Property.
Four hours a week. Fall term. PROFESSOR GARDNER.
- LW 8. REAL PROPERTY.—A continuation of course 7.
Three hours a week. Winter term. PROFESSOR GARDNER.
- LW 9. AGENCY.—The text-book is Huffcut's Cases on Agency.
Two hours a week. Winter term. MR. WALZ.
- LW 10. BANKRUPTCY.—Lectures.
One hour a week. Winter term. MR. HAMLIN.
- LW 11. BANKRUPTCY.—A continuation of course 10.
One hour a week. Spring term. MR. HAMLIN.
- LW 12. CRIMINAL LAW.—The text-book is Beale's Cases on Criminal Law.
Four hours a week. Spring term. MR. WALZ.
- LW 13. QUASI CONTRACTS.—The text-book not selected.
Two hours a week. Spring term. PROFESSOR GARDNER.
- LW 14. COMMON LAW PLEADING.—Lectures.
Three hours a week. Spring term. MR. MARTIN.
- LW 15. EQUITY.—The text-books are Bispham on Equity Jurisprudence, and Shepard's Illustrative Cases in Equity. *Four hours a week.* Fall term. MR. WALZ.

LW 16. EQUITY JURISPRUDENCE.—A continuation of course 15.
Four hours a week. Winter term. MR. WALZ.

LW 17. EVIDENCE.—The text-book is Thayer's Cases on Evidence.

Four hours a week. Fall term. PROFESSOR GARDNER.

LW 18. EVIDENCE.—A continuation of course 17.

Three hours a week. Winter term. PROFESSOR GARDNER.

LW 19. PRIVATE CORPORATIONS.—The text-book is Cummings's Cases on Private Corporations.

Four hours a week. Fall term. PROFESSOR GARDNER.

LW 20. PRIVATE CORPORATIONS.—A continuation of course 19.
Two hours a week. Winter term. PROFESSOR GARDNER.

LW 21. REAL PROPERTY.—The text-book is Finch's Cases on the Law of Property in Law.

Three hours a week. Fall term. MR. WALZ.

LW 22. REAL PROPERTY.—A continuation of course 21.

Three hours a week. Winter term. MR. WALZ.

LW 23. CONSTITUTIONAL LAW.—The text-book is Boyd's Cases.

Two hours a week. Winter term. PROFESSOR ROGERS.

LW 24. DOMESTIC RELATIONS.—The text-book is Elwell's Leading Cases.

Two hours a week. Winter term. PROFESSOR GARDNER.

LW 25. WILLS AND ADMINISTRATION.—The text-book is Chaplin's Cases on Wills.

Four hours a week. Spring term. PROFESSOR GARDNER.

LW 26. PARTNERSHIP.—The text-book is Ames's Cases on Partnership. *Four hours a week.* Spring term. MR. WALZ.

LW 27. EQUITY PLEADING.—Lectures. *Two hours a week.* Spring term. MR. CLARK.

LW 28. ROMAN LAW.—Lectures.

One hour a week. Spring term. JUDGE EMERY.

LW 29. EVIDENCE.—Lectures.

The time is not fixed. JUDGE WISWELL.

LW 30. MEDICAL JURISPRUDENCE.—Lectures.

Two hours a fortnight. Winter term. MR. SOUTHARD.

LW 31. MEDICAL JURISPRUDENCE.—A continuation of course 30. *Two hours a fortnight.* Spring term. MR. SOUTHARD.

MATHEMATICS AND ASTRONOMY.

PROFESSOR HART; PRESIDENT HARRIS; MR. CRATHORNE.

Ms 1. SOLID GEOMETRY.—Solid and spherical geometry, including the mensuration of solids, and original demonstrations.

The text-book is Gore's Solid Geometry. *Five hours a week for eight weeks.* Spring term. MR. CRATHORNE.

Ms 18. ALGEBRA.—Review of quadratic equations and of the binomial theorem with integral, fractional, and negative exponents; variation; progression; convergence and divergence of series; undetermined coefficients; partial fractions; permutations and combinations; probability; logarithms; exponential and logarithmic series; computation of logarithms; the theory of equations.

The text-book is Wells's College Algebra, Part 2. *Five hours a week.* Fall term. PROFESSOR HART; PRESIDENT HARRIS; MR. CRATHORNE.

Ms 4. PLANE TRIGONOMETRY.—The text-book is Phillips and Strong's Trigonometry. *Five hours a week for ten weeks.* Spring term. PROFESSOR HART; MR. CRATHORNE.

Ms 19. SPHERICAL TRIGONOMETRY.—A continuation of course 4, with additional problems and applications to spherical trigonometry. *Five hours a week for eight weeks.* Spring term. PROFESSOR HART.

Ms 5. ANALYTICAL GEOMETRY.—A brief study of the point, right line, and conic sections.

The text-book is Wentworth's Analytic Geometry. *Five hours a fortnight.* Spring term. MR. CRATHORNE.

Ms 6. ANALYTICAL GEOMETRY.—A more extended course. The straight line and conic sections, including polar and oblique coördinates; the equation of the second degree; introduction to solid analytical geometry.

The text-book is Nichols's Analytic Geometry. *Five hours a week.* Fall term. PROFESSOR FERNALD; MR. CRATHORNE.

Ms 7. CALCULUS.—Differentiation; integration by fundamental formulas; integration regarded as a summation; definite integrals.

The text-book is Lambert's Differential and Integral Calculus. *Five hours a week.* Spring term. PROFESSOR HART; PROFESSOR FERNALD.

Ms 8. CALCULUS.—Applications of differential calculus; applications of integral calculus.

The text-book is Lambert's Differential and Integral Calculus. *Five hours a fortnight.* Fall term. PROFESSOR HART.

Ms 9. DESCRIPTIVE ASTRONOMY.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects, and work in the observatory.

The text-book is Young's Elements of Astronomy. *Five hours a fortnight.* Spring term. PROFESSOR HART.

Ms 10. PRACTICAL ASTRONOMY.—Problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The instruments used are the sextant, artificial horizon, portable chronometer, theodolite, and vertical circle. *Five hours a fortnight.* Spring term. PROFESSOR HART.

Ms 11. ADVANCED ALGEBRA.—Determinants and the solution of higher equations. *Five hours a fortnight.* Spring term. MR. CRATHORNE.

Ms 12. ADVANCED INTEGRAL CALCULUS.—A course based upon Byerly's Integral Calculus. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR HART.

Ms 13. ADVANCED INTEGRAL CALCULUS.—A continuation of course 12. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR HART.

Ms 20. SOLID ANALYTICAL GEOMETRY.—Lectures based on C. Smith's Solid Geometry. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR HART.

Ms 15. DIFFERENTIAL EQUATIONS.—The text-book is Murray's Differential Equations. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR HART.

Ms 16. PRACTICAL ASTRONOMY.—The theory and use of the sextant, universal instrument, transit, and zenith telescope. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR HART.

Ms 17. PRACTICAL ASTRONOMY.—A continuation of course 16. *Five hours a week.* Given in the spring term of even years. PROFESSOR HART.

PHYSICS.

PROFESSOR STEVENS; MR. DORSEY; MR. SIDENSPARKER.

Ps 1. GENERAL PHYSICS.—Lectures on the dynamics of solids, liquids and gases; sound and light; experiments before the class; problems. *Five hours a week.* Fall term. PROFESSOR STEVENS.

Ps 2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Five hours a fortnight.* Spring term. PROFESSOR STEVENS.

Ps 12. GENERAL PHYSICS.—A course covering the ground of course 1, with more attention to the experimental and historical aspects and less to the mathematical.

The text-book is Gage's Principles of Physics. *Five hours a fortnight.* Fall term. MR. DORSEY.

Ps 13. GENERAL PHYSICS.—A continuation of course 12. *Five hours a fortnight.* Spring term. MR. DORSEY.

Ps 3. ELEMENTARY PHYSICS.—A non-mathematical course, covering the ground of course 1. The recitations are supplemented by lectures and experimental demonstrations.

The text-book is Dolbear's Natural Philosophy. *Five hours a fortnight.* Fall term. MR. DORSEY.

Ps 4. ELEMENTARY PHYSICS.—A continuation of course 3. *Two hours a week.* Spring term. MR. DORSEY.

Ps 5. LABORATORY PHYSICS.—The subjects usually included in an under-graduate course. Special attention is given to the reduction of observations, and the tabulation of results.

Nichols's Laboratory Manual is made the basis of most of the experiments. † *Five hours a week.* Spring term. PROFESSOR STEVENS; MR. DORSEY; MR. SIDENSPARKER.

Ps 6. LABORATORY PHYSICS.—A brief course for students in the short course in pharmacy. † *Two hours a fortnight.* Spring term. MR. SIDENSPARKER.

Ps 7. ADVANCED OPTICS.—Lectures in continuation of course 1, based chiefly upon Preston's Light. *Five hours a fortnight.* Spring term. PROFESSOR STEVENS.

Ps 8. ADVANCED PHYSICS.—One course in mathematical physics is offered each year. For this year the text-book is Merriman's Least Squares. *Five hours a fortnight.* Fall term. PROFESSOR STEVENS.

Ps 9. LABORATORY PHYSICS.—General laboratory work in continuation of course 5. † *Five hours a week.* Fall term. PROFESSOR STEVENS.

Ps 10. LABORATORY PHYSICS.—Advanced laboratory work in optics, in continuation of course 9. † *Five hours a week.* Spring term. PROFESSOR STEVENS.

Ps 11. ELECTRICAL MEASUREMENT AND TESTING.—The measurement of resistance, potential, current and capacity; the testing of galvanometers, etc. The charge for this course is \$2.50. † *Four hours a week.* Fall term. MR. DORSEY.

Ps 14. ELECTRICAL MEASUREMENT AND TESTING.—Additional work in the subjects offered in course 11, with lectures on the mathematical theory of electrical instruments. The charge for this course is \$1.00. *One hour a week.* Fall term. PROFESSOR STEVENS. † *Three hours a week.* Fall term. MR. DORSEY.

Ps 15. LABORATORY PHYSICS.—A special course, open to students who have completed courses 9, 10, and 11. Some subject is assigned for original investigation, or the work of a published research is repeated. † *Five hours a week.* Fall term. PROFESSOR STEVENS.

Ps 16. LABORATORY PHYSICS.—A continuation of course 15. † *Five hours a week.* Spring term. PROFESSOR STEVENS.

DRAWING.

PROFESSOR GROVER; MR. WESTON; MR. CLARK.

Dr. 1. DRAWING.—Free-hand work in perspective and model drawing; lettering.

† *Five hours a week.* Fall term. MR. CLARK.

Dr 2. MATHEMATICAL DRAWING.—The plotting of functions, and the solution of equations by the graphic method.

The text-book is Harris and Hart's *Lessons in Mathematical Drawing*. † *Three hours a week for thirteen weeks.* Fall and spring terms. MR. CLARK.

Dr 3. MECHANICAL DRAWING.—Instruction and practice in the care and use of drawing instruments, in the drawing of geometrical problems, and in the use of water colors. The text-book is Faunce's *Mechanical Drawing*.

† *Five hours a week.* Spring term. MR. CLARK.

Dr 4. MECHANICAL DRAWING.—Problems in shades and shadows, and dimension drawing.

The text-book is Faunce's Mechanical Drawing. † *Five hours a week*. Fall term. MR. CLARK.

Dr 5. GENERAL DRAWING.—Isometric and cabinet projections, perspective, and the preparation of working drawings. Lectures and exercises in the drawing room.

† *Twelve hours a week for five weeks*. Spring term. MR. WESTON.

Dr 6. DESCRIPTIVE GEOMETRY.—Elementary problems; tangents, intersection of planes, cylinders, cones, spheres, etc. The time is divided equally between the recitation room and drawing room.

The text-book is Church's Descriptive Geometry. *Five hours a fortnight*. Fall term. MR. WESTON; MR. CLARK.

Dr 7. DESCRIPTIVE GEOMETRY.—A continuation of course 6. *Three hours a fortnight*. Spring term. MR. WESTON; MR. CLARK.

Dr 8. STEREOTOMY.—The application of the methods of descriptive geometry to the preparation of drawings for retaining walls, bridge abutments, piers, arches, etc.

† *Twelve hours a week for five weeks*. Spring term. MR. WESTON.

CHEMISTRY.

PROFESSOR AUBERT; ASSISTANT PROFESSOR RYLAND; MR. ROGERS;
MR. CROCKETT; MR. SMALL.

Ch 1. GENERAL CHEMISTRY.—Recitations and lectures on the general principles of chemistry, illustrated by charts, experiments, etc.

The text-book is Remsen's Inorganic Chemistry. *Five hours a fortnight*. Fall term. MR. ROGERS.

Ch 2. GENERAL CHEMISTRY.—A continuation of course 1. *Five hours a fortnight*. Spring term. MR. ROGERS.

Ch 3. LABORATORY CHEMISTRY.—The preparation of the more common elements and inorganic compounds, and the study of their properties.

The text-book is Remsen and Randall's Chemical Experiments. † *Two hours a week.* Fall term. MR. CROCKETT.

Ch 4. LABORATORY CHEMISTRY.—Elementary qualitative analysis.

† *Two hours a week.* Spring term. MR. CROCKETT.

Ch 5. INORGANIC CHEMISTRY.—Lectures and recitations, illustrated by specimens.

The text-book is Joannis's Cours elementaire de chimie, Vols. 1 and 2. *Five hours a fortnight.* Fall term. PROFESSOR RYLAND.

Ch 6. INORGANIC CHEMISTRY.—A continuation of course 5. *Five hours a fortnight.* Spring term. PROFESSOR RYLAND.

Ch 7. ORGANIC CHEMISTRY.—The marsh gas series. Lectures and recitations, illustrated by specimens.

The text-book is Remsen's Organic Chemistry. *Five hours a fortnight.* Fall term. PROFESSOR RYLAND.

Ch 8. ORGANIC CHEMISTRY.—The unsaturated compounds and the benzene series.

The text-book is Remsen's Organic Chemistry. *Five hours a fortnight.* Spring term. PROFESSOR RYLAND.

Ch 10. CHEMICAL READING.—Study and translation of foreign works. *One hour a week.* Fall term. PROFESSOR RYLAND.

Ch 11. LABORATORY PROCESSES.—Laboratory methods and processes used in the arts. *Five hours a fortnight.* Spring term. PROFESSOR RYLAND.

Ch 12. ORGANIC CHEMICALS.—The preparation and purification of typical organic substances.

Remsen's Organic Chemistry is used for reference. † *Five hours a week.* Fall term. PROFESSOR RYLAND.

Ch 14. QUALITATIVE ANALYSIS.—The determination and the separation of the constituents of inorganic substances, and the study of the reactions involved in these processes.

The text-book is Noyes's Qualitative Analysis. *The time varies; it is stated in the tables.* MR. ROGERS.

Ch 15. QUALITATIVE ANALYSIS.—The examination of mixtures of salts and the determination of their components.

The text-book is Noyes's Qualitative Analysis. *The time varies; it is stated in the tables.* MR. ROGERS.

Ch 16. QUANTITATIVE ANALYSIS.—Gravimetric determinations.

The text-book is Appleton's Quantitative Analysis. *The time varies; it is stated in the tables.* MR. SMALL.

Ch 18. QUANTITATIVE ANALYSIS.—Analysis of complex alloys, minerals, etc.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* Fall term. PROFESSOR RYLAND.

Ch 19. VOLUMETRIC ANALYSIS AND ASSAYING.—Acidimetry, alkalimetry, oxydometry; gold and silver assaying.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* PROFESSOR RYLAND.

Ch 20. AGRICULTURAL ANALYSIS.—The analysis of fodders, fertilizers, milk, and other agricultural products. The methods are those recommended by the Association of Official Agricultural Chemists. *The time varies; it is stated in the tables.* PROFESSOR RYLAND.

Ch 21. TOXICOLOGY AND URINALYSIS.—The determination of the commoner poisons; the analysis of urine.

The text-book is Witthaus's Urinalysis and Toxicology. *The time varies; it is stated in the tables.* PROFESSOR RYLAND.

Ch 22. THESIS WORK.—The thesis must embody the results of original work in analysis, or research. † *Fifteen hours a week for thirteen weeks.* Spring term. PROFESSOR RYLAND.

Ch 23. ORGANIC CHEMISTRY.—A continuation of course 8. *Five hours a fortnight.* Fall term. PROFESSOR RYLAND.

Ch 24. INDUSTRIAL CHEMISTRY.—General processes of technical chemistry, and selected subjects including the principal manufactured products of special interest. *Five hours a fortnight.* Spring term. PROFESSOR AUBERT.

Ch 25. TECHNICAL ANALYSIS.—The analysis of ores and industrial products. † *Five hours a week.* Fall term. PROFESSOR RYLAND.

Ch 26. PHYSICAL CHEMICAL METHODS.—The determination of molecular weight by the vapor density, boiling point, and freezing point methods. The use of the refractometer and the polariscope. † *Five hours a week.* Spring term. PROFESSOR RYLAND.

Ch 27. LABORATORY PHYSIOLOGICAL CHEMISTRY.—Qualitative tests of fats, carbohydrates, protein, blood, milk, etc.

The text-book is May's Physiological Chemistry. † *Ten hours a week for nine weeks.* Fall term. PROFESSOR JACKMAN.

Ch 13. DESCRIPTIVE MINERALOGY.—The text-book is Moses and Parsons's Elements of Mineralogy. † *Two hours a week.* Spring term. PROFESSOR JACKMAN.

NATURAL HISTORY.

PROFESSOR HARVEY; MR. STOVER.

Nh 1. CRYPTOGRAMIC BOTANY.—A detailed study of about thirty type forms. Special attention is given to algæ and to useful and injurious fungi. Students collect specimens and prepare an herbarium.

The text-book is Bessey's Botany. *Five hours a fortnight.* Fall term. PROFESSOR HARVEY.

Nh 2. LABORATORY BOTANY.—The use of the microscope, micrometers, camera lucida, and microtome; the preparation of slides; the analysis, description, and classification of cryptogams, and their preparation for the herbarium. † *Two hours a week.* Fall term. PROFESSOR HARVEY; MR. STOVER.

Nh 3. ADVANCED PHYSIOLOGY.—A consideration of the nervous system and special senses of the human body.

The text-book is Kirke's Handbook of Physiology. *Five hours a fortnight.* Spring term. PROFESSOR HARVEY.

Nh 4. LABORATORY PHYSIOLOGY.—Examination of skeleton, manikin, charts, models, microscopic slides, and the dissection of lower animals. † *Two hours a week.* Spring term. PROFESSOR HARVEY.

Nh 5. INVERTEBRATE ZOOLOGY.—A detailed study of type forms of all the branches. *Five hours a fortnight.* Fall term. PROFESSOR HARVEY.

Nh 6. LABORATORY ZOOLOGY.—Supplementary to course 5. The student uses the compound microscope, makes dissections and careful drawings, and classifies the forms studied. † *Five hours a week.* Fall term. MR. STOVER.

Nh 7. HELMINTHOLOGY.—A course in zoology with special attention to animal parasites. † *Four hours a week.* Spring term. PROFESSOR HARVEY.

Nh 8. COMPARATIVE VERTEBRATE ZOOLOGY.—A comparative study of type forms of vertebrate animals. Special attention is given to the zoology of the domestic animals.

The text-book is Packard's Zoology. *Seven hours a fortnight.* Fall term. PROFESSOR HARVEY.

Nh 9. LABORATORY ZOOLOGY.—Museum work; study of charts, and models; dissections of the fish, frog, turtle, bird, and rat; methods of preparing specimens for collections. † *Four hours a week.* Spring term. PROFESSOR HARVEY.

Nh 10. ENTOMOLOGY.—The anatomy, physiology, classification, and economic importance of insects.

The text-books are Smith's Economic Entomology, and Comstock's Entomology. *Five hours a fortnight.* Spring term. PROFESSOR HARVEY.

Nh 11. GEOLOGY.—Special attention is given to the origin and formation of soils, to the method of conducting a geological survey, and to the geology of Maine.

The text-book is Scott's Introduction to Geology. *Five hours a fortnight.* Fall term. PROFESSOR HARVEY.

Nh 12. HUMAN ANATOMY.—A detailed study of the human skeleton. Examination of a manikin showing details of the respiratory, digestive, circulatory, reproductive, depurgatory, nervous, and muscular systems, and of the organs of the special senses.

The text-book is Gray's Anatomy. *Five hours a fortnight.* Spring term. PROFESSOR HARVEY.

Nh 13. BOTANY.—An exhaustive study of some phenogamic order, together with a prepared collection of the Maine species. † *Five hours a week.* Fall term. PROFESSOR HARVEY.

Nh 14. BOTANY.—An exhaustive study of some lesser group of cryptogams, or the life history of some species. † *Five hours a week.* Spring term. PROFESSOR HARVEY.

Nh 15. ZOOLOGY.—History and principles of zoology. † *Five hours a week.* Fall term. PROFESSOR HARVEY.

Nh 16. ZOOLOGY.—A detailed study of some small group of animals, or the history of some species. † *Five hours a week.* Spring term. PROFESSOR HARVEY.

AGRICULTURE.

PROFESSOR WOODS; PROFESSOR GOWELL; PROFESSOR MERRILL;
PROFESSOR RUSSELL.

Ag 1. BIOLOGICAL CHEMISTRY.—Lectures and recitations on the chemical changes in nature important to agriculture; the composition of air, soils, natural waters, and plants; the sources and assimilation of plant food, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Johnson's How Crops Grow. *Five hours a fortnight.* Fall term. PROFESSOR MERRILL.

Ag 2. BIOLOGICAL CHEMISTRY.—A continuation of course 1. Lectures and recitations in physiological chemistry, including the composition of the animal body, and of food materials; the chemical changes involved in the digestion and assimilation of food; the chemistry of milk and dairy products, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Arthus's *Chimie physiologique*. *Five hours a week*. Spring term. PROFESSOR MERRILL.

Ag 3. AGRICULTURAL CHEMISTRY.—Lectures on the origin, composition, preparation and use of commercial fertilizers; the supply, composition, care and use of farm manures, and the general considerations which pertain to the maintenance of soil fertility. *Five hours a fortnight for nine weeks*. Given in the spring term of even years. PROFESSOR WOODS.

Ag 4. AGRICULTURAL PHYSICS.—Lectures on the relation of soils to heat and moisture; the mechanical condition of soils best suited to plant growth, and the objects to be gained by cultivation. *Five hours a fortnight for nine weeks*. Given in the spring term of odd years. PROFESSOR WOODS.

Ag 5. AGRICULTURAL ENGINEERING.—Lectures on farm drainage, irrigation, water supply for stock and household, farm implements and machinery, handling crops, construction of farm buildings, sites, etc. *Five hours a fortnight for nine weeks*. Given in the spring term of even years. PROFESSOR GOWELL.

Ag 6. STOCK FEEDING.—Lectures upon the production of cattle foods and their composition; formulating rations for milk and meat production; the application of the lectures to the animals in the herd.

The text-book is Henry's *Feeds and Feeding*. *Five hours a week for seven weeks*. Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 7. DAIRYING.—Lectures upon the formation and composition of milk; sources of infection; bacteria and their relation to dairying; ferments and their effects.

The text-books are Grotenfelt and Woll's Principles of Modern Dairy Practice, and Wing's Milk and Its Products. *Five hours a fortnight for nine weeks.* Given in the spring term of even years. PROFESSOR GOWELL.

Ag 8. STOCK BREEDING.—Lectures upon animal reproduction, the principles of breeding, and the means of improvement and development. Practice is given in judging animals by a scale of points.

The text-books are Miles's Cattle Breeding, and Saunder's Horse Breeding. *Five hours a week for seven weeks.* Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 9. POULTRY INDUSTRY.—Lectures, with practice in handling poultry; judging by a scale of points; breeding; hatching by natural and artificial processes; the use of machinery; caponizing; the construction and arrangement of buildings. *Five hours a week for four weeks.* Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 10. DAIRY PRACTICE.—The treatment and handling of milk and cream; milk testing for fat and other solids; aëration, pasteurization and sterilization; the application of acid tests and ferments to butter and cheese making; operating and caring for dairy machinery; making, curing and judging butter and cheese; the business management of factories and creameries. Each student is required to provide two suits of clothes made of white drilling. † *Seven hours a week for twelve weeks.* Given in the spring term of even years. PROFESSOR GOWELL.

Ag 11. VETERINARY SCIENCE.—Lectures, demonstrations and clinics, illustrated by models, natural preparations, and living animals. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR RUSSELL.

Ag 12. DISSECTING.—A brief course intended to make the student familiar with the location and appearance of the more important organs of the animal body. † *Seven hours a week for six weeks.* Spring term. PROFESSOR RUSSELL.

Ag 13. BACTERIOLOGY.—A study of the morphology and biology of bacteria and fungi, particularly those of pathologic or economic importance; culture methods; biological examinations of air and water. During the time given to laboratory work, exercises in this course will be held every day, and the number of exercises will be correspondingly decreased. The instructor will arrange for an exchange of time with other laboratory courses. † *Five hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

Ag 14. ANIMAL HISTOLOGY.—Dissecting and the preparation of the most important tissues and organs. † *Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

Ag 15. LABORATORY BACTERIOLOGY.—An advanced course. † *Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

HORTICULTURE.

PROFESSOR MUNSON; MR. STOVER.

Ht 1. GENERAL BOTANY.—The structure and functions of the organs of plants; the development and relationship of the leading groups. Lectures, supplemented by work in the laboratory, greenhouses, and field.

Gray's School and Field Book of Botany is used for reference. † *Five hours a week.* Spring term. PROFESSOR MUNSON; MR. STOVER.

Ht 2. POMOLOGY.—The economic importance, methods of propagation and culture, and the marketing of fruits; the principles and practice of spraying plants. Lectures. *Five hours a fortnight for nine weeks.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 3. VEGETABLE GARDENING.—The history and uses of leading garden vegetables, with directions for their culture in the field and under glass. Lectures. *Five hours a fortnight for nine weeks.* Given in the fall term of even years. PROFESSOR MUNSON.



FERNALD HALL.

Ht 4. PLANT VARIATION.—A discussion of the underlying principles of horticulture. The origin and distribution of cultivated plants; their variation as affected by soil, climate, and cultivation; the methods and effects of crossing; the principles of selection, and the influence of heredity. Students in this course must have taken course 1. *Five hours a fortnight for nine weeks.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 5. LANDSCAPE GARDENING.—The principles of landscape art and their application. *Five hours a fortnight for nine weeks.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 6. LABORATORY HORTICULTURE.—Practical work in orchard, garden, and greenhouse, supplementing courses 2 and 3. †*Five hours a week.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 7. LABORATORY HORTICULTURE.—Practical work in the laboratory, the nursery, and on the campus, supplementing courses 4 and 5. †*Two hours a week.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 8. HISTOLOGY OF PLANTS.—A description and comparison of tissues, with investigation of the minute anatomy of vegetable organs, and studies in the phenomena of cell development and fertilization.

Goodale's Physiological Botany is used for reference. †*Five hours a week for nine weeks.* Spring term. PROFESSOR MUNSON.

Ht 9. PLANT BREEDING.—A systematic study of the amelioration of plants by cultivation. Lectures and investigations concerning: the fact and philosophy of variation, the causes of individual differences, the choice and fixation of varieties; the philosophy of the crossing of plants, the limits of crossing, the function of a cross; how domestic varieties originate, the influence of heredity, the principles of selection.

Bailey's Plant Breeding, Darwin's Animals and Plants under Domestication, and Darwin's Cross and Self Fertilization in the

Vegetable Kingdom, are used for reference. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 10. FORESTRY. Importance and scope of the subject; meteorological influences; financial considerations; the propagation of trees and the planting of forests; forest management; forest products; forest fires, their prevention and control; enemies and disease. Lectures. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 11. PLANT PATHOLOGY.—A systematic study of the more important diseases of plants. Students in this course must have taken course 8. Lectures and investigations. † *Two hours a week.* Given in the fall term of odd years. PROFESSOR MUNSON.

PHARMACY.

ASSISTANT PROFESSOR JACKMAN.

Pm 1. PHYSICAL AND OFFICIAL PHARMACY.—The history of pharmacopœias, dispensaries, etc.; weights and measures, specific gravity, the pharmaceutical uses of heat, distillation, solution, filtration, etc.; official preparations; pharmaceutical problems, involving percentage solutions, parts by weight and measure, chemical principles and equations, actual pharmacy operations.

The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 2. INORGANIC, ORGANIC, AND EXTEMPORANEOUS PHARMACY.—The elements, official salts, and inorganic acids, their preparation and classification; organic compounds, their classification, official preparations; official drugs of the materia medica, classified according to their proximate principles, the preparation of these drugs, and animal preparations; extemporaneous pharmacy, the principles of dispensing, store management, etc.

The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 3. LABORATORY PHARMACY.—Official preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups and tinctures; official tests of chemicals, drugs, and preparations, for identity, strength and adulteration; drug assaying.

The text-book is Caspari's Pharmacy, or the U. S. Pharmacopœia. † *Twelve hours a week.* Fall term.

Pm 4. PHARMACOPŒIA AND PRESCRIPTIONS.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in processes and preparations; critical examination of prescriptions from actual files, with reference to inelegance, physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc.

The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring term.

Pm 5. INORGANIC PHARMACOGNOSY.—Official and common names; practical exercises in the identification of specimens.

The text-book is the U. S. Pharmacopœia. *Five hours a fortnight.* Fall term.

Pm 6. ORGANIC PHARMACOGNOSY.—Official and common names, practical exercises.

The text-book is the U. S. Pharmacopœia. *Four hours a week.* Spring term.

Pm 7. MATERIA MEDICA.—Chemicals and drugs, their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes.

The text-book is Potter's Materia Medica. *Five hours a fortnight.* Fall term.

Pm 8. THESIS WORK.—The thesis must embody the results of original work in analysis, or research. † *Ten hours a week.* Spring term.

CIVIL ENGINEERING.

PROFESSOR GROVER; MR. WESTON; MR. MURRAY.

Ce 1. PLANE SURVEYING.—Recitations on the general principles of land surveying, the laying out of land, the dividing of land, surveying of public lands, direct leveling, and the variation of the magnetic needle.

The text-book is Raymond's Surveying. *Five hours a fortnight.* Spring term. MR. WESTON.

Ce 2. FIELD WORK IN SURVEYING.—The uses of the chain, compass, transit, and level. Instruments are adjusted, original surveys made, and old lines retraced. Plats are prepared of the surveys made in the field. †*Four hours a week.* Spring term. MR. WESTON; MR. MURRAY.

Ce 3. RAILROAD ENGINEERING.—Lectures and recitations on the theory of railroad curves, switches, turnouts and slope stakes; the calculation of earthworks, and the resistance to trains offered by grades and curves; the theory of economic location.

The text-book is Carhart's Field Book for Civil Engineers. *Five hours a fortnight.* Fall term. MR. WESTON.

Ce 4. RAILROAD WORK.—The location and detailed survey of a railroad several miles long. The curves are laid out, levels taken, and all the necessary measurements made to enable the student to compute the excavations and embankments and estimate the cost of construction. †*Five hours a week.* Fall term. MR. WESTON; MR. MURRAY.

Ce 5. HIGHWAY ENGINEERING.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. *One hour a week.* Fall term. MR. WESTON.

Ce 6. MECHANICS.—The principles of statics; the algebraic and graphic solution of statical problems, including simple trusses; exercises in finding the moment of inertia, center of gravity, shearing force and bending moment.

The text-book is Church's *Mechanics of Engineering*. *Five hours a week*. Fall term. MR. WESTON.

Ce 7. MECHANICS.—A continuation of course 6, including the principles of dynamics. *Five hours a week*. Spring term. MR. WESTON.

Ce 8. SANITARY ENGINEERING.—Drainage of land; plumbing of houses; drainage and sewerage of towns; sewage disposal; water supply and purification; ventilation of houses.

The text-book is Merriman's *Sanitary Engineering*. *Five hours a fortnight*. Fall term. PROFESSOR GROVER.

Ce 9. HIGHER SURVEYING.—The plane table, stadia measurements, topographical surveying, the elements of geodesy, the measurement of base lines, calculation of a system of triangulation. † *Ten hours a week for eight weeks*. Spring term. MR. WESTON; MR. MURRAY.

Ce 10. HYDRAULICS.—The weight, pressure, and motion of water; the flow of water through orifices and pipes; weir gauging; the flow of water in open channels, mains, and distribution pipes; distribution systems; the construction of water works for towns and cities.

The text-book is Church's *Mechanics of Engineering*. *Five hours a fortnight*. Fall term. PROFESSOR GROVER.

Ce 11. HYDRAULICS FIELD WORK.—The measurement of the flow of rivers is illustrated by the application of the current meter and the various forms of floats to the Penobscot River or some of its large branches. † *Seven hours a week for six weeks*. Fall term. PROFESSOR GROVER; MR. MURRAY.

Ce 12. STRUCTURES.—A detailed study of the properties of materials used in engineering structures; their resistance to bending, breaking, extension and compression, under the various conditions of practice; the theory of stresses in framed structures; the usual systems of loading; the principles of designing.

Merriman's *Mechanics of Materials*, Johnson's *Framed Structures*, and Merriman's *Roofs and Bridges*, Part III, are used for reference. *Five hours a week*. Fall term. PROFESSOR GROVER.

Ce 13. STRUCTURES.—A continuation of course 12; including the study of problems in connection with masonry structures; natural and artificial foundations; the stability of dams and retaining walls; the designing of bridge piers and abutments; the theory of the masonry arch.

The text-book is Baker's Masonry Construction. *Five hours a week.* Spring term. PROFESSOR GROVER.

Ce 14. DESIGNING.—Designs for several of the common types of wooden and steel structures, and preparation of drawings for the shop. †*Seven hours a week for twelve weeks.* Fall term. PROFESSOR GROVER; MR. MURRAY.

Ce 15. DESIGNING AND THESIS WORK.—A continuation of course 14 and the preparation of a thesis. †*Twelve hours a week.* Spring term. PROFESSOR GROVER; MR. MURRAY.

Ce 16. HYDRAULIC ENGINEERING.—Rainfall, evaporation, and stream-flow; the collection, purification, and distribution of water for city supplies; water meters, water wheels and motors; the development and utilization of water power. *Five hours a fortnight.* Fall term. PROFESSOR GROVER.

Ce 17. HYDRAULIC ENGINEERING.—A continuation of course 16. *Five hours a fortnight.* Spring term. PROFESSOR GROVER.

Ce 18. SANITARY SCIENCE.—Lectures on the causes and prevention of disease, sanitation and the public health, and the relations of the engineer to this work. *One hour a week.* Fall term. PROFESSOR GROVER.

MECHANICAL ENGINEERING.

PROFESSOR FLINT; MR. WALKER; MR. STEWARD.

Me 1. CARPENTRY.—The care and sharpening of tools, the squaring of stock, and taking work out of wind; practice in making different joints in soft and hard wood; wood turning. The charge for material is \$4.00 a term. †*Seven hours a week for twelve weeks.* Fall term. MR. WALKER.

Me 19. MACHINE DRAWING.—Practice in tracing completed drawings, and in making drawings of standard bolts, threads, and simple machine parts, from actual dimensions. Special attention is given to the care and handling of instruments, lettering, and methods of projection.

† *Seven hours a week for six weeks.* Fall term. MR. WALKER.

Me 2. FORGE WORK.—Drawing and upsetting; welding; making rings, chain links, eye bolts, bolt heads, etc.; the making of a steel punch, cold chisels, and a set of lathe tools, for use in the machine shop; foundry work. The student must furnish a forging hammer, calipers, and scale, at a cost of \$2.50. The charge for materials is \$5.00 a term. † *Five hours a week.* Spring term. MR. WALKER.

Me 3. KINEMATICS.—Methods of transmitting and transforming motion, illustrated by the solution of practical problems; study of forms of gearing, cone pulleys, etc.; construction of cams, lobed wheels, and gear teeth.

The text-book is Jones's Kinematics. † *Five hours a week.* Spring term. MR. WALKER.

Me 4. MACHINE WORK.—Exercises in filing and chipping; lathe work, drilling, boring and threading in the lathe; making cut gears, machinist taps, and finished bolts; exercises on the planer and shaper. Each student provides himself with center gauge, steel scale, and files, at a cost of \$2.50. The charge for materials is \$5.00 a term. Students will be given credit for work in commercial shops on presentation of satisfactory proof. *The time devoted to machine work varies.* MR. STEWARD.

Me 5. ANALYTICAL MECHANICS.—Motion of bodies under the action of forces; work, energy, composition and resolution of forces, center of gravity, friction, virtual velocities, moment of inertia.

The text-book is Wood's Analytical Mechanics. *Five hours a week.* Fall term. MR. WALKER.

Me 6. ANALYTICAL MECHANICS.—A continuation of course 5. *Five hours a week for six weeks.* Spring term. MR. WALKER.

Me 7. MECHANICS OF MATERIALS.—Strength and elasticity of materials; strength of cylinders; riveted joints; shear and bending moment in beams; strength and deflection of beams, columns, and shafts.

The text-book is Merriman's *Mechanics of Materials*. *Five hours a week for twelve weeks*. Spring term. MR. WALKER.

Me 8. STRUCTURES.—A continuation of course 7, with applications to framed structures; graphical methods of analyzing roof and bridge trusses, and the stability of walls. Merriman's *Mechanics of Materials*, and Merriman's *Roofs and Bridges* are used for reference. *Five hours a fortnight*. Fall term. MR. WALKER.

Me 9. MACHINE DESIGN.—The principles of machine construction, treated by means of text-book, lectures, and a study of methods in modern practice; the preparation of working drawings, and the sketching of original designs of simple machine parts.

The text-book is Jones's *Machine Design*, Part II. † *Seven hours a fortnight*. Spring term. MR. WALKER.

Me 10. HYDRO-MECHANICS.—The behavior of liquids in motion and under pressure, flowing through pipes and in open channels, with problems.

The text-book is Bowser's *Hydro-Mechanics*. *Five hours a fortnight*. Fall term. PROFESSOR FLINT.

Me 11. HEAT AND STEAM.—The characteristics of steam and its behavior in pipes, boilers, and particularly in the cylinders of engines; problems involving the properties of saturated steam; the calculation of steam pipes and safety valves; the design of a boiler suited to run an engine under given conditions, and the detail drawings.

The text-book is Benjamin's *Heat and Steam*. *Five hours a fortnight*. Fall term. PROFESSOR FLINT.

Me 12. STEAM BOILER DESIGN.—Drawings of the more important parts of the design worked out in course 11. † *Twelve hours a week*. Fall term. PROFESSOR FLINT.

Me 13. TESTING.—Tests of steam gauges, boilers, etc.; tests of different metals under tension and compression. *Five hours a fortnight.* Spring term. PROFESSOR FLINT.

Me 14. STEAM ENGINE.—The steam engine as a source of power; the design, proportions and working of engine cylinders, steam pipes, and ports; engine valves, eccentrics, adjustable eccentrics; the locomotive link motion with its connections; problems on the slide valve and link motion; the calculation of details of an engine.

The text-book is Auchincloss's Link and Valve Motion. *Seven hours a fortnight.* Spring term. PROFESSOR FLINT.

Me 15. STEAM ENGINE DESIGN.—Drawings of the parts worked out in course 14; the setting of valves by means of the indicator; the calculation of horse power; the consumption of water and coal, etc. † *Fifteen hours a week for nine weeks.* Spring term. PROFESSOR FLINT.

Me 16. THESIS WORK.—The design of a piece of machinery. † *Fifteen hours a week for nine weeks.* Spring term. PROFESSOR FLINT.

Me 17. DESIGN.—A course supplementary to Me 9, consisting of an original design of some piece of scientific apparatus, or, an original investigation of some engineering problem to be fully written up and presented to the department.

† *Five hours a week.* Fall term. PROFESSOR FLINT.

Me 18. DESIGN.—A continuation of course 17.

† *Five hours a week.* Spring term. PROFESSOR FLINT.

ELECTRICAL ENGINEERING.

PROFESSOR WEBB; MR. DORSEY; MR. GROVER.

Ee 1. ELECTRICITY AND MAGNETISM.—This course continues the subjects of electricity and magnetism begun in physics. Lectures are given, and laboratory methods and results are discussed with the class.

The text-book is Silvanus Thompson's *Electricity and Magnetism*. *Two hours a week*. Fall term. PROFESSOR WEBB; MR. DORSEY.

Ee 2. ELECTRICITY AND MAGNETISM.—A continuation of course 1; the dynamo and apparatus connected with its operation.

The text-book is Hawkins and Wallis's *The Dynamo*. *Three hours a week*. Spring term. PROFESSOR WEBB.

Ee 3. ELECTRICAL MACHINERY.—Lectures on the theory and construction of dynamos, motors, etc. *Five hours a fortnight*. Fall term. PROFESSOR WEBB.

Ee 4. ALTERNATING CURRENT MACHINERY.—The designing, construction, and operating of alternating current machinery, and the use of direct and alternating current machinery in lighting and the transmission of power.

The text-book is Jackson's *Alternating Currents and Alternating Current Machinery*. *Five hours a week for nine weeks*. Spring term. PROFESSOR WEBB.

Ee 5. ELECTRICAL DESIGN.—This course is similar to the course in machine design given to students in mechanical engineering. Each student is required to make the computations and complete drawings for a dynamo. † *Seven hours a week*. Fall term. PROFESSOR WEBB.

Ee 6. ELECTRICAL DESIGN.—The problems involved in designing alternating current machinery, in the electrical transmission of power, and in the distribution of electric light. † *Ten hours a week for nine weeks*. Spring term. PROFESSOR WEBB.

Ee 7. LABORATORY ELECTRICITY.—Tests of electrical instruments; experimental work with dynamos, motors, etc.; tests of efficiency; photometric tests of electric lamps; the practical management of the electric light plant. The charge for this course is \$2.50. † *Five hours a week*. Fall term. MR. GROVER.

Ee 13. ALTERNATING CURRENTS.—Theory and application of alternating currents; design and construction of alternating current generator, motor and transformer; methods of testing alternating current machines.

The text-book is Jackson's Alternating Currents and Alternating Current Machinery. *Five hours a fortnight.* Fall term. PROFESSOR WEBB.

Ee 14. ELECTRICAL TESTING.—Theory and construction of telegraph and telephone instruments; methods of operating and testing. Lectures. *Five hours a fortnight for nine weeks.* Spring term. PROFESSOR WEBB.

Ee 16. THESIS WORK.—The designing of electrical apparatus, laboratory investigation, or commercial testing, presented in proper form. † *Fifteen hours a week for nine weeks.* Spring term. PROFESSOR WEBB.

MILITARY SCIENCE AND TACTICS.

MR. WALKER.

Each man student is required to take military drill, unless physically unfit, and to attend recitations in military science.

The drill, course 1, occupies the first ten weeks of the fall term, and the last thirteen weeks of the spring term, one hour a day, three days in the week, counting as one hour and a half in reckoning the student's total time. The remaining eight weeks in the fall term, and five weeks in the spring term, are given:—by the senior class, to recitations in military science, course 4, three recitations a fortnight; by the junior class, to recitations in military science, course 3, three recitations a fortnight; by the sophomore class, to recitations in military science, course 2, three hours a fortnight; by the freshman class, to mathematical drawing.

Mt 1. MILITARY DRILL.—(a.) School of the soldier, school of the company, school of the battalion, and extended order

movements. (b.) Target practice at known distances up to six hundred yards. Marksman's buttons are awarded to cadets who qualify. (c.) Military signaling with flag, lantern, heliograph, and field telegraph. (d.) Band practice. † *Three hours a week for the first ten and last thirteen weeks of each year.*

Mt 2. GUARD DUTY.—Recitations on the Manual of Guard Duty. Required of sophomores. *Three hours a fortnight for thirteen weeks.*

Mt 3. DRILL REGULATIONS.—Recitations on U. S. Infantry Drill Regulations. Required of juniors. *Three hours a fortnight for thirteen weeks.*

Mt 4. ART OF WAR.—Required of seniors.

The text-book is Mercur's Elements of the Art of War. *Three hours a fortnight for thirteen weeks.*

ORGANIZATION OF THE UNIVERSITY.

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together form a unit. The organization is as follows.

COLLEGE OF ARTS AND SCIENCES.

- The Classical Course,
- The Latin-Scientific Course,
- The Scientific Course,
- The Chemical Course,
- The Preparatory Medical Course.

COLLEGE OF AGRICULTURE.

- The Agricultural Course,
- The Special Courses in General Agriculture,
- The Special Course in Horticulture,
- The Special Course in Dairying,
- The Agricultural Experiment Station.

COLLEGE OF ENGINEERING.

- The Civil Engineering Course.
- The Mechanical Engineering Course,
- The Electrical Engineering Course.

COLLEGE OF PHARMACY.

- The Pharmacy Course,
- The Short Course in Pharmacy.

SCHOOL OF LAW.

EXPLANATION OF TABLES.

The college year is divided equally into a fall term and a spring term. The year of the School of Law is divided into three terms, the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively. For details see the calendar.

The quota of studies prescribed for each student is, for a minimum, fifteen hours, and for a maximum, twenty hours of class-room work each week, exclusive of declamations and themes. The tables are made so as to require, with the military work of three hours a fortnight, approximately eighteen hours' work each week. The numbers in the tables show the average number of hours a week given to each study. The number 2.5 means three hours one week and two the next. In making up the quota of studies, laboratory work, and other exercises not requiring preparation, count as half time—that is, two hours in the laboratory are counted as equivalent to one hour. The hours devoted to such studies are marked with a dagger (†) in the tables.

The abbreviations and numerals preceding a study refer to the explanatory statements to be found on the pages given.

COLLEGE OF ARTS AND SCIENCES.

The aim of this college is to furnish a liberal education and to afford opportunity for specialization along literary, philosophical, and general and special scientific lines. The college comprises:

The Classical Course.

The Latin-Scientific Course.

The Scientific Course.

The Chemical Course.

The Preparatory Medical Course.

THE CLASSICAL COURSE.

This course is planned for those who desire general culture. About two-thirds of the work is elective. The required work includes Greek, Latin, mathematics, English, French, German, chemistry, psychology, and political economy. After the freshman year Greek and Latin are elective. The student may give special attention to language, mathematics, natural science, chemistry, or physics.

Upon graduation the student receives the degree of Bachelor of Arts. Three years later, on proof of satisfactory advancement, and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Arts.

STUDIES OF THE CLASSICAL COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.

	Hours.
Lt1, Latin, p. 34	4.0
Gk1, Greek, p. 36	4.0
M125, German, p. 33 or M121, French, p. 31 }	2.0
Ms18, Algebra, p. 43	5.0
Dr2, Math. Drawing, p. 47, 8 w. ..	†3.0

SPRING TERM—18 WEEKS.

	Hours.
Lt2, Latin, p. 34	4.0
Gk2, Greek, p. 36	4.0
M126, German, p. 33 or M122, French, p. 31 }	2.0
Ms4, Trigonometry, p. 43, 10 w. }	5.0
Ms1, Solid Geometry, p. 43, 8 w. }	5.0
Dr2, Math. Drawing, p. 47, 5 w. ..	†3.0

SOPHOMORE YEAR.

<i>Required.</i>	
Eh3, Rhetoric, p. 29	2.5
M11, French, p. 31, or M15, German, p. 33 }	4.0
Ch1, General Chemistry, p. 48 ...	2.5
Ch3, Laboratory Chemistry, p. 49, ..	†2.0

<i>Elective.</i>	
Gk3, Greek, p. 36	2.5
Gk9, Greek Sculpture, p. 37	2.5
Gk11, Greek, p. 37 ..	2.5
Gk13, Greek, p. 38	2.5
Lt3, Latin, p. 34	2.5
Ps1, General Physics, p. 45	5.0
Ps12, General Physics, p. 45	2.5
Ms6, Analytical Geometry, p. 44, ..	5.0
Others as in Latin Scientific Course.	

<i>Required.</i>	
Eh4, Rhetoric, p. 29	2.5
M12, French, p. 31, or M16, German, p. 33 }	4.0
Ch2, General Chemistry, p. 48	2.5
Ch4, Laboratory Chemistry, p. 49, ..	†2.0

<i>Elective.</i>	
Gk4, Greek, p. 36	2.5
Gk10, Greek Sculpture, p. 37	2.5
Gk12, Greek, p. 37	2.5
Lt4, Latin, p. 34	2.5
Ps2, General Physics, p. 45	2.5
Ps13, General Physics, p. 46	2.5
Ps5, Laboratory Physics, p. 46 ...	†5.0
Ms5, Analytical Geometry, p. 44, ..	2.5
Others as in Latin Scientific Course.	

JUNIOR YEAR.

<i>Required.</i>	
Pl1, Psychology, p. 38	2.5

<i>Elective.</i>	
Gk5, Greek, p. 36	2.5
Lt5, Latin, p. 34	2.5
Lt7, Roman Elegiac Poets, p. 34, ..	2.5
Lt13, Roman Literature, p. 35 ...	2.5
Lt17, Roman Topography, p. 35..	1.0
Lt19, Latin Writing, p. 36	1.0
M13, French, p. 31	2.5
M17, German, p. 33	2.5
Others as in Latin Scientific Course.	

<i>Required.</i>	
Pl2, Logic, p. 38	2.5

<i>Elective.</i>	
Gk6, Greek, p. 37	2.5
Lt6, Latin, p. 34	2.5
Lt8, Roman Elegiac Poets, p. 34, ..	2.5
Lt14, Roman Literature, p. 35 ...	2.5
Lt18, Roman Private Life, p. 36, ..	1.0
Lt20, Roman Epigraphy, p. 36 ...	1.0
M14, French, p. 31	2.5
M18, German, p. 33	2.5
Cv2, English History, p. 39	2.5
Cv3, American History, p. 39	2.5
Others as in Latin Scientific Course.	

SENIOR YEAR.

<i>Required.</i>	
Cv15, Constitutional Law and History, p. 40	2.5

<i>Elective.</i>	
Gk7, Greek, p. 37	2.5
Lt5, Latin, p. 34	2.5
Lt9, Roman Satire, p. 35	2.5
Lt11, Roman Philosophy, p. 35 ..	2.5
Lt15, Roman Rhetoric and Ora- tory, p. 35	2.5
Others as in Latin Scientific Course.	

<i>Required.</i>	
Cv16, Constitutional Law and History, p. 40	2.5

<i>Elective.</i>	
Gk8, Greek, p. 37	2.5
Lt6, Latin, p. 34	2.5
Lt10, Roman Satire, p. 35	2.5
Lt12, Roman Philosophy, p. 35 ..	2.5
Lt16, Roman Rhetoric and Ora- tory, p. 35	2.5
Others as in Latin Scientific Course.	

THE LATIN-SCIENTIFIC COURSE.

This course differs from the classical course by omitting Greek. It requires an extensive study of modern languages, and permits a wide choice of elective work.

The required studies include Latin, English, and modern languages; mathematical and physical science; natural science; and political economy. Latin is not required, but may be elected, after the freshman year. By a proper selection of elective studies, the student may give special attention to language, mathematics, natural science, chemistry, or physics.

Upon graduation the student receives the degree of Bachelor of Philosophy; three years later, on proof of satisfactory advancement, and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Philosophy.

STUDIES OF THE LATIN SCIENTIFIC COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.		SPRING TERM—18 WEEKS.	
	Hours.		Hours.
Ml5, German, p. 33	4.0	Ml6, German, p. 33.....	4.0
Lt1, Latin, p. 34.....	4.0	Lt2, Latin, p. 34.....	4.0
Ms18, Algebra, p. 43.....	5.0	Ms4, Trigonometry, p. 43, 10 w ..	5.0
Ch1, General Chemistry, p. 48 ...	2.5	Ms1, Solid Geometry, p. 43 or	} 5.0
Ch3, Laboratory Chemistry, p. 49, †2.0		Ms19, Spherical Trigonometry,	
Dr2, Math. Drawing, p. 47, 8 w ..	†3.0	8 w., p. 43	
		Ch2, General Chemistry, p. 48 ...	2.5
		Ch4, Laboratory Chemistry, p. 49, †2.0	
		Dr2, Math. Drawing, p. 47, 5 w ...	†3.0

SOPHOMORE YEAR.

<i>Required.</i>		<i>Required.</i>	
Eh3, Rhetoric, p. 29.....	2.5	Eh4, Rhetoric, p. 29.....	2.5
Ml1, French, p. 31 or }	4.0	Ml2, French, p. 31 or }	4.0
Ml21, French, p. 31 }	2.0	Ml22, French, p. 31 }	2.0
Ps1, General Physics, p. 45 or }	5.0	Ps2, General Physics, p. 45 or } ..	2.5
Ps12, General Physics, p. 45 }	2.5	Ps13, General Physics, p. 46 } ..	
<i>Elective.</i>		<i>Elective.</i>	
Lt3, Latin, p. 34.....	2.5	Lt4, Latin, p. 34.....	2.5
Ms6, Analytical Geometry, p. 44.	5.0	Ms5, Analytical Geometry, p. 44.	2.5
Others as in Scientific Course.		Ps5, Laboratory Physics, p. 46... †5.0	
		Dr3, Mechanical Drawing, p. 47.. †5.0	
		Ht1, Botany, p. 56	†5.0
		Others as in Scientific Course.	

JUNIOR YEAR.

<i>Required.</i>		<i>Required.</i>	
Eh8, English Literature, p. 30...	2.5	Eh9, English Literature, p. 30....	2.5
Pl1, Psychology, p. 38	2.5	Pl2, Logic, p. 38.....	2.5
<i>Elective.</i>		<i>Elective.</i>	
M13, French, p. 31.....	2.5	M14, French, p. 31.....	2.5
M17, German, p. 33.....	2.5	M18, German, p. 33.....	2.5
Lt5, Latin, p. 34.....	2.5	Lt6, Latin, p. 34....	2.5
Lt7, Roman Elegiac Poets, p. 34.	2.5	Lt8, Roman Elegiac Poets, p. 34.	2.5
Lt13, Roman Literature, p. 35....	2.5	Lt14, Roman Literature, p. 35....	2.5
Lt17, Roman Topography, p. 35..	1.0	Lt18, Roman Private Life, p. 36 .	1.0
Lt19, Latin Writing, p. 36.....	1.0	Lt20, Roman Epigraphy, p.36....	1.0
Others as in Scientific Course.		Cv2, English History, p. 39.....	
		Cv3, American History, p. 39....	
		Others as in Scientific Course.	

SENIOR YEAR.

<i>Required.</i>		<i>Required.</i>	
Cv13, Political Economy, p. 39... 2.5		Cv14, Political Economy, p. 39... 2.5	
Cv15, Constitutional Law and History, p. 40..... 2.5		Cv16, Constitutional Law and History, p. 40..... 2.5	
<i>Elective.</i>		<i>Elective.</i>	
Lt5, Latin, p. 34..... 2.5		Lt6, Latin, p. 34 2.5	
Lt9, Roman Satire, p. 35..... 2.5		Lt10, Roman Satire, p. 35..... 2.5	
Lt11, Roman Philosophy, p. 35... 2.5		Lt12, Roman Philosophy, p. 35... 2.5	
Lt15, Roman Rhetoric and Oratory, p. 35..... 2.5		Lt16, Roman Rhetoric and Oratory, p. 35..... 2.5	
Others as in Scientific Course.		Others as in Scientific Course.	

THE SCIENTIFIC COURSE.

This course is arranged for those who seek a broad general training, based chiefly upon the study of science, modern languages, and history. It prepares students for executive positions in banking, commercial, or manufacturing establishments, or for teaching.

The work of the freshman year consists of English, modern languages, history, mathematics, drawing, chemistry, and botany. After the freshman year, a large part of the work—varying from one-third at the beginning to three-fourths at the end—is elective. The required courses include analytical geometry, general physics, geology, French, German, English literature, English history, United States history, constitutional history, psychology, logic, and political economy. The elective studies may be selected to give a comprehensive course in the mathematical or natural sciences, or a specialized course in modern languages, mathematics, physics, or natural science.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE SCIENTIFIC COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.

	Hours.
Eh3, Rhetoric, p. 29.....	2.5
Ms18, Algebra, p. 43.....	5.0
Ml5, German, p. 33, or {	4.0
Ml27, German, p. 33 {	
Dr2, Mathematical Drawing, p.	
47, 8 w.....	†3.0
Ch1, General Chemistry, p. 48...	2.5
Ch3, Laboratory Chemistry, p. 49, †2.0	

SPRING TERM—18 WEEKS.

	Hours.
Eh4, Rhetoric, p. 29.....	2.5
Ms4, Trigonometry, p. 43, 10 w... 5.0	
Ms1, Solid Geometry, p. 43, or {	5.0
Ms19, Spherical Trigonometry, } p. 43, 8 w.	
Ml6, German, p. 33, or {	4.0
Ml28, German, p. 33 {	
Dr2, Mathematical Drawing, p.	
47, 5 w.....	†3.0
Ht1, General Botany, p. 56.....	†5.0
Ch2, General Chemistry, p. 48...	2.5
Ch4, Laboratory Chemistry, p. 49, †2.0	

SOPHOMORE YEAR.

Required.

Ml1, French, p. 31, or {	4.0
Ml21, French, p. 31, {	2.0
Ps1, General Physics, p. 45 or {	5.0
Ps12, General Physics, p. 45 {	2.5

Elective.

Ch5, Inorganic Chemistry, p. 49.	2.5
Ch14, Qualitative Analysis, p. 49, †5.0	
Ms6, Analytical Geometry, p. 44,	5.0
Nh1, Cryptogamic Botany, p. 51,	2.5
Nh2, Laboratory Botany, p. 51... †2.0	
Ltl7, Roman Topography, p. 35..	1.0
Gk9, Greek Sculpture, p. 37.....	2.5
Gk11, Greek, p. 37	2.5
Gk13, Greek, p. 38.....	2.5

Required.

Ml2, French, p. 31, or {	4.0
Ml22, French, p. 31, {	2.0
Ps2, General Physics, p. 45, or {	2.5
Ps13, General Physics, p. 46 {	
Ps5, Laboratory Physics, p. 46..	†5.0
Ms5, Analytical Geometry, p. 44,	2.5

Elective.

Eh5, Anglo-Saxon, p. 30	2.5
Cv1, General History, p. 39	2.5
Ms7, Calculus, p. 44.....	5.0
Ms11, Advanced Algebra, p. 44..	2.5
Ch15, Qualitative Analysis, p. 50.	†5.0
Ht8, Histol. of Plants, p. 57, 9 w. }	†5.0
Ag13, Bacteriology, p. 56, 9 w. }	
Ltl8, Roman Private Life, p. 36..	1.0
Gk10, Greek Sculpture, p. 37.....	2.5
Gk12, Greek, p. 37.....	2.5

JUNIOR YEAR.

Required.

Eh8, English Literature, p. 30... 2.5	
Ml3, French, p. 31, or {	2.5
Ml7, German, p. 33 {	
Pl1, Psychology, p. 38.....	2.5

Required.

Eh9, English Literature, p. 30 ... 2.5	
Ml4, French, p. 31, or {	2.5
Ml8, German, p. 33, {	
Pl2, Logic, p. 38.....	2.5
Cv3, American History, p. 39	2.5
Cv2, English History, p. 39.....	2.5

JUNIOR YEAR—Concluded.

<i>Elective.</i>		<i>Elective.</i>	
Ml9, Spanish, p. 32.....	2.5	Ml10, Spanish, p. 32.....	2.
Ml11, Italian, p. 32.....	2.5	Ml12, Italian, p. 32.....	2.5
Ml13, Old French, p. 32.....	2.5	Ml14, Old French, p. 32.....	2.5
Ml15, French Literature, p. 31...	2.5	Ml16, French Literature, p. 31 ..	2.5
Ml17, French Literature, p. 31...	2.5	Ml18, French Literature, p. 32...	2.5
Cv4, Philosophy of History, p.39,	2.5	Ms9, Descrip. Astronomy, p. 44..	2.5
Cv11, International Law, p. 40...	2.5	Ms10, Practical Astronomy, p.44,	2.5
Ms8, Calculus, p. 44	2.5	Ms13, Adv. Integ. Calculus, p. 45,	2.5
Ms12, Advanced Integral Calculus, p. 45.....	2.5	Ms15, Differential Equations, p. 45.....	2.5
Ms20, Solid Analytical Geometry, p. 45.....	2.5	Ps7, Advanced Optics, p. 46.....	2.5
Ps8, Advanced Physics, p. 46....	2.5	Ps10, Laboratory Physics, p. 47..	†5.0
Ps9, Laboratory Physics, p. 46....	†5.0	Ch15, Qualitative Analy., p. 50...	†5.0
Ps11, Electrical Measurements and Testing, p. 47.....	†4.0	Ch16, Quantitative Analy., p. 50,	†4.0
Ch14, Qualitative Analysis, p. 49,	†5.0	Nh7, Helminthology, p. 52	†4.0
Nh5, Invertebrate Zoology, p. 52,	2.5	Nh9, Laboratory Zoology, p. 52..	†4.0
Nh6, Laboratory Zoology, p. 52,	†5.0	Nh10, Entomology, p. 52.....	2.5
Nh8, Comp. Vert. Zoology, p. 52,	3.5	Me6, Analytical Mechanics, p. 63, 6 w.	5.0
Me5, Analytical Mechanics, p. 63,	5.0	Me7, Mech. of Materials, p. 64,	
Eel, Electricity and Magnetism, p. 65.....	2.0	Ee2, Electricity and Magnetism, p. 66.....	3.0

SENIOR YEAR.

<i>Required.</i>		<i>Required.</i>	
Cv13, Political Economy, p. 39...	2.5	Cv14, Political Economy, p. 39...	2.5
Cv15, Constitutional Law and History, p. 40.....	2.5	Cv16, Constitutional Law and History, p. 40.....	2.5
<i>Elective.</i>		<i>Elective.</i>	
Eh10, English Literature, p. 30..	2.5	Eh11, English Literature, p. 30..	2.5
Pl3, Hist. of Philosophy, p. 38...	2.5	Cv10, Municipal Law, p. 40.....	1.0
Ms12, Advanced Integral Calculus, p. 45.....	2.5	Cv12, Library Work, p. 40.....	†5.0
Ms20, Solid Analytical Geometry, p. 45.....	2.5	Ms13, Advanced Integral Calculus, p. 45.....	2.5
Ms16, Practical Astronomy, p.45,	2.5	Ms15, Differential Equations, p. 45.....	2.5
Nh11, Geology, p. 53	2.5	Ms17, Practical Astronomy, p.45,	2.5
Pl4, Pedagogy, p. 38	2.5	Nh3, Advan. Physiology, p. 52...	2.5
Ht9, Plant Breeding, p. 57.....	2.5	Nh4, Lab. Physiology, p. 52.. ...	†2.0
Ht10, Forestry, p. 58.....	2.5		
Ht11, Plant Pathology, p. 58.....	†2.0		

THE CHEMICAL COURSE.

This course is designed for those who plan to become professional chemists and analysts, managers or chemists of industries which require an extensive knowledge of chemistry, or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment stations. In addition to a theoretical knowledge of chemistry, the student acquires, in his biological studies, knowledge of comparative anatomy, and of the lower forms of life, and, in his work in the chemical laboratory, facility in the manipulation of chemical apparatus and the microscope.

Lectures and recitations are closely associated with practical work in the laboratories. The student is drilled in the use of chemical apparatus, in accurate observation, and in careful interpretation of directions.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE CHEMICAL COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

FALL TERM--18 WEEKS.		SPRING TERM--18 WEEKS.	
	Hours.		Hours.
Eh3, Rhetoric, p. 29.....	2.5	Eh4, Rhetoric, p. 29.....	2.5
Ms18, Algebra, p. 43.....	5.0	Ms4, Trigonometry, p. 43, 10 w... 5.0	
M15, German, p. 33 or {	4.0	Ms1, Solid Geometry, p. 43 or {	8 w. 5.0
M127, German, p. 33 {		Ms19, Spherical Trigonometry, p. 43.....	
Dr1, Drawing, p. 47.	†5.0	M16, German, p. 33 or {	4.0
Dr2, Math. Drawing, p. 47, 8 w... †3.0		M128, German, p. 33 {	
Ch1, General Chemistry, p. 48....	2.5	Dr2, Math. Drawing, p. 47, 5 w... †3.0	
Ch3, Laboratory Chemistry, p. 49, †2.0		Ht1, General Botany, p. 56.....	†5.0
		Ch2, General Chemistry, p. 48....	2.5
		Ch4, Laboratory Chemistry, p. 49, †2.0	

SOPHOMORE YEAR.

M11, French, p. 31 or {	4.0	M12, French p. 31 or {	4.0
M121, French, p. 31 (2 hrs.) and {		M122, French, p. 31 (2 hrs.) and {	
M17, German, p. 33 (2.5 hrs.)	2.5	M18, German, p. 33 (2.5 hrs.)	2.5
Ps12, General Physics, p. 45.....	2.5	Ps13, General Physics, p. 46.....	2.5
Ch5, Inorganic Chemistry, p. 49. 2.5		Ps5, Laboratory Physics, p. 46 ..	†5.0
Ch14, Qualitative Analysis, p. 49, †10.0		Ms5, Analytical Geometry, p. 44. 2.5	
Nh1, Cryptogamic Botany, p. 51, 2.5		Ch6, Inorganic Chemistry, p. 49, 2.5	
Nh2, Laboratory Botany, p. 51... †2.0		Ch15, Qualitative Analysis, p. 50, †7.0	

JUNIOR YEAR.

P11, Psychology, p. 38.....	2.5	P12, Logic, p. 38	2.5
M17, German, p. 33. or {	2.5	M18, German, p. 33, or {	2.5
M13, French, p. 31 {		M14, French, p. 31, {	
Ch7, Organic Chemistry, p. 49 ...	2.5	Ch8, Organic Chemistry, p. 49 ...	2.5
Ch10, Chemical Reading, p. 49....	1.0	Ch19, Volumetric Analysis and Assaying, p. 50.....	†15.0
Ch16, Quan. Analysis, p. 50.....	†5.0	Nh10, Entomology, p. 52, or {	2.5
Ch18, Quan. Analysis, p. 50.....	†10.0	Eh9, Eng. Literature, p. 30, or {	
Nh5, Invertebrate Zoology, p. 52, or {		Ms9, Descrip. Astronomy, p. 44 }	
Eel, Electricity and Magnetism, p. 65 (2 hrs.) or {	2.5		
Eh8, English Literature, p. 30, }			

SENIOR YEAR.

Cv13, Political Economy, p. 39 ..	2.5	Cv14, Political Economy, p. 39 ..	2.5
Cv15, Constitutional Law and History, p. 40.....	2.5	Cv16, Constitutional Law and History, p. 40.....	2.5
Ch12, Organic Chemicals, p. 49..	†5.0	Ch11, Laboratory Processes, p.49,	2.5
Ch20, Agricultural Analysis, p.50,	†9.0	Ag13, Bacteriology, p.56,5 w.†10 {	†15.0
Ch21, Toxicology and Urinalysis, p. 50	†1.0	Ch22, Thesis Work, p.50,13 w.†15 }	
Ch23, Organic Chemistry, p. 50 ..	2.5	Ch24, Industrial Chemistry, p. 51,	2.5
Nh11, Geology, p. 53	2.5		

THE PREPARATORY MEDICAL COURSE.

This course is arranged to meet the needs of those students who purpose becoming physicians, but offers to those who are interested in the biological sciences a useful training for teaching or investigation.

The technical work of the course, consists mainly of two lines of study, chemical and biological. The chemical studies are continued for three and a half years, and include advanced inorganic and organic chemistry, biological chemistry, qualitative and quantitative analysis, toxicology, and the testing of drugs. The biological studies extend throughout the course and include botany, both phænogamic and cryptogamic, invertebrate zoology, comparative vertebrate zoology, human anatomy, advanced physiology, bacteriology, plant histology and animal histology.

Important features of the course are: a study of animal parasites, particularly those affecting the human subject; a free use of the microscope in studying vegetable and animal tissues; experience in identifying and cultivating pathogenic organisms; a thorough consideration of the chemistry of foods, of the animal body, and of digestion and metabolism. Graduates of this course are received into medical schools without examination, and by many of the best schools are given credit for the work of the first year.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE PREPARATORY MEDICAL COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

The studies for this year are the same as in the Chemical Course, page 77.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

SPRING TERM—18 WEEKS.

	Hours.		Hours.
M11, French, p. 31, or		M12, French, p. 31, or	
M121, French, p. 31 (2 h.) and }	4.0	M122, French, p. 31 (2 h.) and }	4.0
M17, German, p. 33 (2.5 hrs.) }		M18, German, p. 33 (2.5 hrs.) }	
Ps1, General Physics, p. 45, or }	5.0	Ps2, General Physics, p. 45, or }	2.5
Ps12, General Physics, p. 45 }		Ps13, General Physics, p. 46 }	
Ch5, Inorganic Chemistry, p. 49..	2.5	Ps5, Laboratory Physics, p. 46 ..	†5.0
Ch14, Qualitative Analysis, p. 49 .	†6.0	Ch6, Inorganic Chemistry, p. 49,	2.5
Nh1, Cryptogamic Botany, p. 51.	2.5	Ch15, Qualitative Analysis, p. 50,	5.0
Nh2, Laboratory Botany, p. 51... †2.0		Ht8, Histology of Plants, p. 57, }	†5.0
		9 w.	
		Ag13, Bacteriology, p. 56, 9 w. }	

JUNIOR YEAR.

M17, German, p. 33, or }	2.5	Pl2, Logic, p. 38	2.5
M13, French, p. 31 }		Cv2, English History, p. 39, or }	2.5
Pl1, Psychology, p. 38	2.5	Ag11, Veterinary Science, p. 55 }	
Ch7, Organic Chemistry, p. 49 ...	2.5	Ch19, Volumetric Analysis, p. 50.†	11.0
Ch16, Quantitative Analysis, p. 50, †6.0		Ch21, Toxicology and Urinalysis,	
Nh5, Invertebrate Zoology, p. 52, 2.5		p. 50.....	†1.0
Nh6, Laboratory Zoology, p. 52.. †5.0		Nh7, Helminthology, p. 52	†4.0
Ag1, Biological Chemistry, p. 53 2.5		Ag2, Biological Chemistry, p. 54	5.0

SENIOR YEAR.

Cv13, Political Economy, p. 39... 2.5		Cv14, Political Economy, p. 39... 2.5	
Cv15, Constitutional Law and		Cv16, Constitutional Law and	
History, p. 40	2.5	History, p. 40.....	2.5
Nh8, Comparative Vertebrate		Nh3, Advanced Physiology, p. 52	2.5
Zoology, p. 52.....	3.5	Nh4, Laboratory Physiology, p. 52	†2.0
Nh11, Geology, p. 53.....	2.5	Nh12, Human Anatomy, p. 53....	2.5
Pm3, Laboratory Pharmacy, }	†10.0	Cv2, English History, p. 39, or }	2.5
p. 59, 9 w.		Ag11, Veterinary Science, p. 55,	
Ch27, Laboratory Physiologi-		Ag14, Animal Histology, p. 56,	†10.0
cal Chemistry, p. 51, 9 w. }		9 w.	
Pm7, Materia Medica, p. 59..... 2.5		Ag15, Lab. Bacteriology, p. 56, 9w }	

COLLEGE OF AGRICULTURE.

The aim of the College of Agriculture is to prepare young men to become farmers, or teachers or investigators of agricultural subjects. The instruction is arranged: first, to secure for the student that intellectual development which is a condition fundamental to the highest success in any calling, and, second, to give the necessary technical knowledge. The college comprises:

The Agricultural Course.

The Special Courses in General Agriculture.

The Special Course in Horticulture.

The Special Course in Dairying.

The Agricultural Experiment Station.

THE AGRICULTURAL COURSE.

This course is designed for those who wish to follow agriculture as a business, or purpose to become teachers or investigators in the sciences related to agriculture. It is broadly educational, particularly in the natural sciences and their relations to human needs and activities, and gives a preliminary training for either business or professional life. The distinctive studies of this course are along technical lines, but the branches pertaining to general culture, to social and civil relations, occupy an important place.

The theoretical instruction, especially that of the last two years, is associated with practical work and observation. Practice is combined with theory whenever necessary for the demonstration of a principle, or when skilled labor is involved, but the student's time is not consumed in merely manual operations.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE AGRICULTURAL COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

The studies of this year are the same as in the Chemical Course, page 77.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.		SPRING TERM—18 WEEKS.	
	Hours.		Hours.
M11, French, p. 31 or	4.0	M12, French, p. 31 or	4.0
M121, French, p. 31 (2 h.) and {		M122, French, p. 31 (2 h.) and {	
M17, German, p. 33 (2.5 hrs.) }		M18, German, p. 33 (2.5 hrs.) }	
Ps1, General Physics, p. 45 or.. }	5.0	Ps2, General Physics, p. 45 or.. }	2.5
Ps12, General Physics, p. 45 .. }	2.5	Ps13, General Physics, p. 46 .. }	2.5
Ch5, Inorganic Chemistry, p. 49.	2.5	Ps5, Laboratory Physics, p. 46... }	†5.0
Ch14, Qualitative Analysis, p. 49.	†6.0	Ch6, Inorganic Chemistry, p. 49.	2.5
Nh1, Cryptogamic Botany, p. 51.	2.5	Ch16, Quan. Analysis, p. 50..... }	†8.0
Nh2, Laboratory Botany, p. 51... }	†2.0	Ht8, Hist. of Plants, p. 57, 9 w. }	†5.0
		Ag13, Bacteriology, p. 56, 9 w. }	†5.0

JUNIOR YEAR.

M17, German, p. 33, or {	2.5	Cv2, English History, p. 39.....	2.5
M13, French, p. 31 }	2.5	Ag2, Biological Chemistry, p. 54,	5.0
Nh5, Invertebrate Zoology, p. 52,	2.5	*Ag7, Dairying, p. 54, 9 w.	2.5
Nh6, Laboratory Zoology, p. 52.. }	†5.0	*Ag5, Agricultural Engineering }	
Ag1, Biological Chemistry, p. 53,	2.5	p. 54, 9 w.	
Ch7 Organic Chemistry, p. 49.... }	2.5	*Ch20, Agricul. Analysis, p. 50... }	†6.0
*Ht4, Plant Variation, p. 57, 9 w. }	2.5	*Ag10, Dairy Practice, p. 55, 12 w. }	†7.0
*Ht5, Landscape Gardening, p. }		*Ag12, Dissecting, p. 55, 6 w. }	2.5
57, 9 w.		*Nh10, Entomology, p. 52.....	
*Ht7, Laboratory Horticulture,			
p. 57.....	†2.0		
*Ht11, Plant Pathology, p. 58 }	†2.0		

SENIOR YEAR.

Cv13, Political Economy, p. 39..	2.5	Cv14, Political Economy, p. 39...	2.5
Cv15, Constitutional Law and	2.5	Cv16, Constitutional Law and	2.5
History, p. 40.....		History, p. 50.....	
Pl1, Psychology, p. 38	2.5	Pl2, Logic, p. 38.....	2.5
Nh8, Comparative Vertebrate	3.5	†Ag3, Agricultural Chemistry, }	2.5
Zoology, p. 52.....		p. 54, 9 w.	
Nh11, Geology, p. 53	2.5	†Ag4, Agricultural Physics, p. }	2.5
†Ht2, Pomology, p. 56, 9 w. }	2.5	54, 9 w.	
†Ht3, Vegetable Gardening, p. }		†Nh3, Advanced Physiology, p. 52	2.5
56, 9 w.		†Ag6, Stock Feeding, p. 54, 7 w. }	5.0
†Ht6, Laboratory Horticulture,	†5.0	†Ag8, Stock Breeding, p. 55, 7 w. }	
p. 57.....		†Ag9, Poultry Industry, p. 55, 4 w. }	2.5
		†Ag11, Veterinary Science, p. 55,	

* Given to juniors and seniors in fall term of odd years and spring term of even years.

† Given to juniors and seniors in fall term of even years and spring term of odd years.

THE SPECIAL COURSES IN AGRICULTURE.

For those who can meet the expense, the investment of time and money necessary to complete the four years' course, is most wise. To others the Special Courses in Agriculture are offered. Students are admitted to courses of such length as their time will allow, and of such breadth as their previous training will permit.

For admission to these courses, applicants should possess a good common school education. No formal entrance examination is required for admission to courses of one term or less, but the professor in charge will satisfy himself of the fitness of candidates to pursue the course with success. The requirements for admission to courses of one year or more are given on page 16.

These courses are intended to give the greatest amount of directly useful knowledge that can be acquired in the time allotted. The studies pursued must usually be selected from those announced in the catalogue, but they will be arranged, so far as practicable, to meet the needs of each student.

The annual expenses for courses of one year or more, are the same as those of students in the four years' courses. No charge is made for rooms. Students in the special courses, who are in attendance for one term or less, are not charged tuition.

These courses, including the work in agriculture, horticulture, animal industry, and veterinary science, are in the general charge of the Professor of Agriculture, to whom inquiries should be addressed.

The outline of the subjects which may be profitably pursued, and which a student may expect to complete within the time allotted, is listed below:

SUBJECTS WHICH MAY BE TAKEN IN ONE TERM OR LESS.

General Agriculture. Plant and Animal Nutrition; Fertilizers and Manures; Breeds, Breeding and Feeding; Farm Machinery; Farm Drainage; Veterinary Science; Bacteriology; Injurious Insects and Fungi; Crops and Crop Production; Farm Gardening; Carpentry; Blacksmithing; Farm Accounts; Business Law.

Horticulture. Injurious Insects; Injurious Fungi; Bacteriology; Propagation of Plants; Vegetable Gardening; Spraying

and Spraying Machines; Fruit Culture; Economic Botany; Ornamental Gardening; Greenhouse Construction and Management.

SHORT WINTER COURSE IN DAIRYING.

The Course in Dairying is intended to meet the needs of those who wish to fit themselves for managers of creameries and cheese factories. If the course is pursued during two terms, and two seasons' satisfactory work is performed in a butter or cheese factory, the student will be granted a certificate of proficiency.

This course begins on the first Tuesday of January and continues six weeks.

An outline of the subjects taken up in this course follows:

First Winter. Plant and Animal Nutrition; Diseases of Dairy Animals; Milk, Butter and Cheese; Cows,—Breeding, Handling and Judging; Building and Furnishings; Barns, Creameries, etc.; Accounts.

Second Winter. Milk, Butter and Cheese; Bacteriology of the Dairy; Veterinary Science; Boiler and Engine; Business Law; Carpentry; Feeding of Cows.

SUBJECTS WHICH MAY BE TAKEN IN A ONE YEAR COURSE IN AGRICULTURE.

General Chemistry; Agricultural Chemistry; Cryptogamic Botany; Laboratory Botany; Plant Variation; Landscape Gardening; Laboratory Horticulture; Pomology; Vegetable Gardening; Invertebrate Zoology; Laboratory Zoology; Entomology; Stock Feeding; Poultry Industry; Dairy Practice; Veterinary Science; Agricultural Physics; Agricultural Engineering; Business Law; Carpentry; Forge Work.

SUBJECTS WHICH MAY BE TAKEN IN A TWO YEARS' COURSE IN AGRICULTURE.

First Year. Rhetoric; Elementary Physics; General Chemistry; Agricultural Mechanics; Cryptogamic Botany; Laboratory Botany; Invertebrate Zoology; Laboratory Zoology; Drawing; Business Law; Entomology; Laboratory Horticulture; Pomology; Vegetable Gardening; General Botany; Carpentry; Forge Work.

Second Year. Laboratory Chemistry; Biological Chemistry; Agricultural Chemistry; Vertebrate Zoology; Physiology; Dissection; Veterinary Science; Stock Feeding; Plant Variation; Landscape Gardening; Laboratory Horticulture; Geology; Agricultural Physics; Agricultural Engineering; Dairying; Stock Feeding; Poultry Industry; Dairy Practice; Bacteriology.

THE AGRICULTURAL EXPERIMENT STATION.

The Maine Agricultural Experiment Station owes its existence to an act of Congress, approved March 2, 1887, popularly known as the Hatch Act. The act of the Legislature accepting the Congressional grant made the Station a department of the University of Maine.

The affairs of the Station are considered by an advisory council consisting of a committee of the trustees of the University, the president of the University, members of the Station staff, and representatives from the State Board of Agriculture, the State Pomological Society, and the State Grange. The recommendations of the council are referred to the trustees for ratification. The Station receives \$15,000 annually from the general government.

The inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters.

The publications of the Station consist of annual reports and frequent short bulletins. The latter are intended to convey to the farmer the results that relate to farm practice. The annual reports contain a fuller statement of the proceedings of the Station, involving the technical language of science. These reports include nothing of value to practical agriculture not set forth in the bulletins. All station bulletins are sent to farmers on request, free of expense. The edition of the annual report is limited and this document is sent only when expressly requested. It is reprinted in the report of the State Board of Agriculture.

COLLEGE OF ENGINEERING.

The College of Engineering provides instruction along the lines indicated by the divisions made below. Two years of general studies, including the natural sciences, mathematics, modern languages, philosophy and economics, are followed by two of technical training. Opportunity is offered for special work in addition to that of the required courses. The college comprises:

The Civil Engineering Course.

The Mechanical Engineering Course.

The Electrical Engineering Course.

THE CIVIL ENGINEERING COURSE.

The object of this course is to give the student a knowledge of mathematics, mechanics, and drawing, experience in the care and use of engineering instruments, and a drill in the application of mathematical principles and rules, with a view to fitting him at graduation to apply himself at once to engineering work. The course is planned to furnish not only technical instruction, but also the basis of a liberal education.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing, including the making of original designs and the preparation of the necessary drawings. Effort is made to acquaint the student with the best engineering structures, and with standard engineering literature.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, and instrument rooms, and is well equipped.

Upon graduation the student receives the degree of Bachelor of Civil Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Civil Engineer.

STUDIES OF THE CIVIL ENGINEERING COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.		SPRING TERM—18 WEEKS.	
	Hours.		Hours.
Eh3, Rhetoric, p. 29.....	2.5	Eh4, Rhetoric, p. 29.....	2.5
Ms18, Algebra, p. 43.....	5.0	Ms4, Trigonometry, p. 43, 10 w ..	5.0
M15, German, p. 33 or {	4.0	Ms1, Solid Geometry, p. 43, } or	8 w. 5.0
M127, German, p. 33		Ms19, Sph. Trigonom., p. 43 }	
Dr1, Drawing, p. 47.....	†5.0	M16, German, p. 33, or {	4.0
Dr2, Math. Drawing, p. 47, 8 w..	†3.0	M128, German, p. 33... }	
Ch1, General Chemistry, p. 48...	2.5	Dr2, Math. Drawing, p. 47, 5 w ..	†3.0
Ch3, Laboratory Chemistry, p. 49, †2.0		Dr3, Mechanical Drawing, p. 47, †5.0	
		Ch2, General Chemistry, p. 48 ...	2.5
		Ch4, Laboratory Chemistry, p. 49, †2.0	

SOPHOMORE YEAR.

M119, French, p. 30, or {	2.0	M120, French, p. 31, or {	2.0
M121, French, p. 31..... }		M122, French, p. 31, }	
Ms6, Analytical Geometry, p. 44,	5.0	Ms7, Calculus, p. 44.....	5.0
Ps1, General Physics, p. 45.....	5.0	Ps2, General Physics, p. 45.....	2.5
Dr4, Mechanical Drawing, p. 48, †5.0		Ps5, Laboratory Physics, p. 46 ..	†5.0
Dr6, Descriptive Geometry, p. 48, 2.5		Dr7, Descriptive Geometry, p. 48, 1.5	
Ce18, Sanitary Science, p. 62.....	1.0	Ce1, Plane Surveying, p. 60.....	2.5
		Ce2, Field Work, Surveying, p. 60, †4.0	

JUNIOR YEAR.

Pl1, Psychology, p. 38.....	2.5	Cv2, English History, p. 39.....	2.5
Ms8, Calculus, p. 44.....	2.5	Pl2, Logic, p. 38.....	2.5
Ms12, Adv. Int. Calculus, p. 45, or	2.5	Ms13, Adv. Int. Calculus, p. 45, or	2.5
Ms20, Solid Analytical Geometry, p. 45, or		Ms15, Diff. Equations, p. 45, or	
Nh11, Geology, p. 53, or	2.5	Ms9, Descriptive Astronomy, p. 44, or	..2.5
Ps8, Math. Physics, p. 46, or		Ps7, Advanced Optics, p. 46, or	
Ps9, Adv. Physics, p. 46, (†5 hrs.)		Ps10, Adv. Lab. Physics, p. 47, (†5 hrs.)	
Ce3, Railroad Engineering, p. 60	2.5	Dr5, General Drawing, p. 48, 5 w.	†12.0
Ce4, Railroad Work, p. 60.....	†5.0	Dr8, Stereotomy, p. 48, 5 w.	
Ce5, Highway Engineering, p. 60,	1.0	Ce9, Higher Surveying, p. 61, 8 w.	5.0
Ce6, Mechanics, p. 60.....	5.0	Ce7, Mechanics, p. 61.....	

SENIOR YEAR.

Cv13, Political Economy, p. 39 ..	2.5	Cv14, Political Economy, p. 39 ..	2.5
Cv15, Constitutional Law and History, p. 40	2.5	Cv16, Constitutional Law and History, p. 40.....	2.5
Ce8, San. Engineering, p. 61, or Mathematics, or Physics as in Junior Year	2.5	Ms10, Practical Astronomy, p. 44	2.5
Ce10, Hydraulics, p. 61.....	2.5	Ce13, Structures, p. 62	5.0
Ce12, Structures, p. 61	5.0	Ce15, Designing and Thesis Work, p. 62, or Math., or Physics, as in Junior Year, elective with †5 hours of Ce15 }	†12.0
Ce11, Hydraulics Field Work, p. 61, 6 w.	†7.0		
Ce14, Designing, p. 62, 12 w.			

THE MECHANICAL ENGINEERING COURSE.

This course is designed to give such a training in mathematics, mechanics, the principles of mechanism, drawing, and manual arts as shall make the student competent to deal successfully with the problems of mechanical engineering. The technical courses include the geometry of machinery; gearing, with problems and practice; the transmission of motion and power by belts, cams, couplings and links; the study and designing of the valve and link motions used in the steam engine; analytical mechanics; hydro-mechanics; the strength of materials; the expansion of steam; the construction of steam engines, and the designing of steam boilers.

The methods of instruction include lectures, recitations, practice in the various branches of shop-work, the solution of problems, the testing of theoretical results by comparison with modern machinery, the inspection of important plants, and the use of journals and catalogues.

The department shares Wingate Hall with the departments of civil engineering, electrical engineering and physics. The machine shop is equipped with iron working and wood working machinery of the most approved forms.

Upon graduation the student receives the degree of Bachelor of Mechanical Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Mechanical Engineer.

STUDIES OF THE MECHANICAL ENGINEERING COURSE.

For Declamations and Themes see page 39; for Military Science see page 67.

FRESHMAN YEAR.

The studies of this year are the same as in the Civil Engineering Course, page 86.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

	Hours.
M119, French, p. 30, or {	2.0
M121, French, p. 31, {	
Ms6, Analytical Geometry, p. 44, {	5.0
Ps1, General Physics, p. 45.....	5.0
Dr6, Descriptive Geometry, p. 48, {	2.5
Me1, Carpentry, p. 62, 12 w. {	
Me19, Machine Drawing, p. 63, {	†7.0
6 w.....	

SPRING TERM—18 WEEKS.

	Hours.
M120, French, p. 31, or {	2.0
M122, French, p. 31, {	
Ms7, Calculus, p. 44.....	5.0
Ps2, General Physics, p. 45.....	2.5
Ps5, Laboratory Physics, p. 46 ..	†5.0
Dr7, Descriptive Geometry, p. 48, {	1.5
Me2, Forge Work, p. 63.....	†5.0
Me3, Kinematics, p. 63.....	†5.0

JUNIOR YEAR.

P11, Psychology, p. 38	2.5	Cv2, English History, p. 39.....	2.5
Ms8, Calculus, p. 44.....	2.5	Pl2, Logic, p. 38.....	2.5
Nh11, Geology, p. 53, or	2.5	Me6, Analytical Mechanics, p.	5.0
Ms12, Advanced Integral Cal-		63, 6 w.	
culus, p. 45, or		Me7, Mech. of Materials, p 64.,	
Ms20, Solid Analytical Geom-	2.5	12 w.	3.5
etry, p. 45, or		Me9, Machine Design, p. 64.....	
Ps8, Advanced Physics, p. 46,		Me4, Machine Work, p. 63, or	
or	5.0	Ms13, Advanced Integral Cal-	10.0
Ps9, Laboratory Physics, p. 46†5		culus, p. 45, 2.5 hrs., or	
Me5, Analytical Mechanics, p. 63		Ms15, Differential Equations,	
Me4, Machine Work, p. 63, or	†8.0	p. 45, 2.5 hrs., or	†10.0
Ps11, Electrical Measurement		Ps7, Advanced Optics, p. 46,	
and Testing, p. 47, elec-		2.5 hrs., or	
tive with †4 hrs. of Me4	2.0	Ps10, Laboratory Physics, p. 47,	†5
Eel1, Electricity and Magnetism,		†5 hrs., elective with †5	
p. 65.....		hrs. of Me4,	

SENIOR YEAR.

Cv13, Political Economy, p. 39 ..	2.5	Cv14, Political Economy, p. 39...	2.5
Cv15, Constitutional Law and	2.5	Cv16, Constitutional Law and	2.5
History, p. 40.....		History, p. 40.....	
Me8, Structures, p. 64.....		Me13, Testing, p. 65.....	
Me10, Hydro-Mechanics, p. 64...	2.5	Me14, Steam Engine, p. 65.....	3.5
Mel1, Heat and Steam, p. 64	2.5	Me15, Steam Engine Design, p.	†15.0
Mel2, Steam Boiler Design, p.	†12.0	65, 9 w., and	
64, or		Me16, Thesis Work, p. 65, 9 w. or	
Mathematics or Physics,		Mathematics or Physics	†15.0
as in Junior year, elec-	†12.0	as in Junior year, elec-	
tive with †5 hrs. of Me12		tive with †5 hrs. of	
		Me15 and Me16,	

THE ELECTRICAL ENGINEERING COURSE.

This course is designed to give the student the training necessary to prepare him to meet successfully the problems of the practical electrical engineer. It is identical with the course in Mechanical Engineering for the first two years. During the last two years the student devotes his time about equally to mechanical and electrical work. He gets a knowledge of steam engineering, boiler management, mechanics and kindred subjects, and at the same time becomes familiar with the various branches of electrical engineering. The work consists of lectures, recitations, designing and drafting, laboratory practice, and plant testing.

The lecture-room, drafting-room, junior and dynamo laboratories are in Wingate Hall. The electric lighting plant occupies a building adjoining the Shop. The equipment, already ample to give the student a thorough preparation for the work of designing, constructing, testing and operating the various machines and instruments found in an electric plant, is to be largely increased during the current year.

Upon graduation the student receives the degree of Bachelor of Mechanical Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Mechanical Engineer or Electrical Engineer, as his professional work may make proper.

STUDIES OF THE ELECTRICAL ENGINEERING COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

The studies of this year are the same as in the Civil Engineering Course, page 86.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

	Hours.
M119, French, p. 30, or {	
M121, French, p. 31 }	2.0
Ms6, Analytical Geometry, p. 44,	5.0
Ps1, General Physics, p. 45.....	5.0
Dr6, Descriptive Geometry, p.48,	2.5
Me1, Carpentry, p. 62, 12 w.....	†7.0
Me19, Machine Draw., p. 63, 6 w. }	†7.0

SPRING TERM—18 WEEKS.

	Hours.
M120, French, p. 31, or {	
M122, French, p. 31 }	2.0
Ms7, Calculus, p. 44.....	5.0
Ps2, General Physics, p. 45.....	2.5
Ps5, Laboratory Physics, p. 46 ..	†7.0
Dr7, Descriptive Geometry, p. 48,	1.5
Me2, Forge Work, p. 63.....	†5.0
Me3, Kinematics, p. 63	†5.0

JUNIOR YEAR.

Pl1, Psychology, p. 38	2.5
Ms8, Calculus, p. 44.....	2.5
Nb11, Geology, p. or	
Ms12, Advanced Integral Calculus, p. 45, or	
Ms20, Solid Analytical Geometry, p. 45, or	
Ps8, Advanced Physics, p.46, or	2.5
Ps9, Laboratory Physics, p. 46, †5.0, or	
Ps14, Electrical Measurement and Testing, p. 47, †5.0	
Ps11, Electrical Measurement and Testing, p. 47.....	†4.0
Me5, Analytical Mechanics, p.63,	5.0
Ee1, Electricity and Magnetism, p. 65.....	2.0
Me4, Machine Work, p. 63.....	†4.0

Cv2, English History, p. 39.....	2.5
Pl2, Logic, p. 38.....	2.5
Me6, Analytical Mechanics, p. 63, 6 w.	
Me7, Applied Mechanics, p. 64 12 w.	5.0
Me9, Machine Design, p. 64, or	
Ms13, Advanced Integral Calculus, p. 45, 2.5, or	
Ms15, Differential Equations, p. 45, 2.5, or	3.5
Ps7, Advanced Optics, p. 46, 2.5, or	
Ps10, Lab. Physics, p. 47, †5.0,	
Ee2, Electricity and Magnetism, p. 66	3.0
Me4, Machine Work, p. 63	†5.0

SENIOR YEAR.

Cv13, Political Economy, p. 39...	2.5
Cv15, Constitutional Law and History, p. 40.....	2.5
Me11, Heat and Steam, p. 64	2.5
Ee3, Electrical Machinery, p. 66.	2.5
Ee5, Electrical Design, p. 66.....	†7.0
Ee7, Laboratory Electricity, p.66,	†5.0
Ee13, Alternating Currents, p. 67,	2.5

Cv14, Political Economy, p. 39...	2.5
Cv16, Constitutional Law and History, p. 40.....	2.5
Me14, Steam Engine, p. 65, or	
Mathematics, or Physics, as in Junior Year,	3.5
Ee4, Alternating Current Machinery, p. 66, 9 w., 1st.	5.0
Ee6, Electrical Design, p. 66, 9 w., 1st	†10.0
Ee14, Electrical Testing, p. 67, 9 w., 2nd.....	2.5
Ee16, Thesis Work, p. 67, 9 w. 2nd.	†15.0

COLLEGE OF PHARMACY.

The College of Pharmacy comprises:

1. The Pharmacy Course.
2. The Short Course in Pharmacy.

THE PHARMACY COURSE.

This course is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine broad general culture and thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, offered in other college courses.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, and the preparation of pharmaceutical compounds, and original investigations.

Upon graduation the student receives the degree of Bachelor of Science; after one year, on proof of professional work or further study, he receives the degree of Graduate in Pharmacy; two years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work, he receives the degree of Master of Science.

STUDIES OF THE PHARMACY COURSE.

For Declamations and Themes see page 29; for Military Science see page 67.

FRESHMAN YEAR.

The studies for this year are the same as in the Chemical Course, page 77.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

	Hours.
M11, French, p. 31, or	4.0
M121, French, p. 31 (2 hrs.) and	
M17, German, p. 33 (2.5 hrs.)	
Ps12, General Physics, p. 45.....	2.5
Ch5, Inorganic Chemistry, p. 49.	2.5
Ch14, Qualitative Analysis, p. 49,†10.0	
Nh1, Cryptogamic Botany, p. 51.	2.5
Nh2, Laboratory Botany, p. 51... †2.0	

SPRING TERM—18 WEEKS.

	Hours.
M12, French, p. 31, or	4.0
M122, French, p. 31 (2 hrs.) and	
M18, German, p. 33 (2.5 hrs.)	
Ps13, General Physics, p. 46.....	2.5
Ps5, Laboratory Physics, p. 46 ..	†5.0
Ch6, Inorganic Chemistry, p. 49..	2.5
Ch15, Qualitative Analysis, p. 50.†10.0	

JUNIOR YEAR.

P11, Psychology, p. 38	2.5
M17, German, p. 33, or	2.5
M13, French, p. 31	
Ch7, Organic Chemistry, p. 49 ...	2.5
Ch10, Chemical Reading, p. 49... ..	1.0
Ch16, Quantitative Analysis, p. 50†10.0	
Ag1, Biological Chemistry, p. 53.	2.5
Pm5, Inorganic Pharmacognosy, p. 59.....	2.5

P12, Logic, p. 38	2.5
Ch8, Organic Chemistry, p. 49 ...	2.5
Ag2, Biological Chemistry, p. 54.	5.0
Nh3, Advanced Physiology, p. 52,	2.5
Ht8, Histology of Plants, p. 57,	†5.0
9 w.	
Ag13, Bacteriology, p. 56, 9 w.	
Pm6, Organic Pharmacognosy, p. 59.....	4.0

SENIOR YEAR.

Cv13, Political Economy, p. 39... ..	2.5
Cv15, Constitutional Law and History, p. 40.....	2.5
Pm2, Pharmacy, p. 58	5.0
Pm3, Laboratory Pharmacy, p. 59.†12.0	
Pm7, Materia Medica, p. 59	2.5

Cv14, Political Economy, p. 39... ..	2.5
Cv16, Constitutional Law and History, p. 40.....	2.5
Ch21, Toxicology and Urinalysis p. 50.....	†2.0
Pm4, Pharmacopœia and Prescriptions, p. 59.....	5.0
Pm8, Thesis Work, p. 59.....	†10.0
Ag15, Laboratory Bacteriology, p. 56.....	†5.0

THE SHORT COURSE IN PHARMACY.

This course is designed for those who, for lack of time or for other reasons, are unable to take the four years' course in pharmacy. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The course corresponds, in general, to the usual full course of the pharmaceutical college. The work required of the

student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores, during term time.

Students who complete this course in a satisfactory manner receive a certificate. Three years later, on presentation of a satisfactory thesis and proof of professional work, or further study, they receive the degree of Graduate in Pharmacy.

STUDIES OF THE SHORT COURSE IN PHARMACY.

For Military Science see page 67.

FIRST YEAR.

FALL TERM—18 WEEKS.

	Hours.
Ps3, Elementary Physics, p. 46...	2.5
Ch1, General Chemistry, p. 48...	2.5
Ch14, Qualitative Analysis, p. 49,†	12.0
Pm1, Pharmacy, p. 58	5.0
Pm5, Inorganic Pharmacognosy, p. 59.....	2.5

SPRING TERM—18 WEEKS.

	Hours.
Ps4, Elementary Physics, p. 46..	2.0
Ps6, Laboratory Physics, p. 46...	†1.0
Ch2, General Chemistry, p. 48...	2.5
Ch16, Quantitative Analysis, p. 50, 9 w.	} †14.0
Ch19, Volumetric Analysis, p. 50, 9 w.	
Ht1, General Botany, p. 56.....	†5.0
Pm6, Organic Pharmacog., p. 59,	4.0

SECOND YEAR.

Ch7, Organic Chemistry, p. 49 ...	2.5	Ch21, Toxicology and Urinalysis, p. 50	†2.0
Ag1, Biological Chemistry, p. 53,	2.5	Ht8, Hist. of Plants, p. 57, 9 w.	} †5.0
Pm2, Pharmacy, p. 58	5.0	Ag13, Bacteriology, p. 56, 9 w.	
Pm3, Laboratory Pharmacy, p. 59,†	12.0	Ag2, Biological Chemistry, p. 54,	5.0
Pm7, Materia Medica, p. 59.....	2.5	Pm4, Pharmacopœia and Pre- scriptions, p. 59.....	5.0
		Pm8, Thesis Work, p. 59.....	†10.0

SCHOOL OF LAW.

FACULTY.

ABRAM WINEGARDNER HARRIS, SC. D.,
President of the University.

GEORGE ENOS GARDNER, M. A.,
Dean and Professor of Law.

ALLEN ELLINGTON ROGERS, M. A.,
Professor of Constitutional Law.

WILL'IAM EMANUEL WALZ, M. A., LL. B.,
Instructor in Law.

CHARLES HAMLIN, M. A.,
Lecturer on Bankruptcy.

LUCILIUS ALONZO EMERY, M. A., LL. D.,
Lecturer on Roman Law.

ANDREW PETERS WISWELL, B. A.,
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S.,
Lecturer on Medical Jurisprudence.

FOREST JOHN MARTIN, LL. B.,
Lecturer on Maine Pleading.

HUGO CLARK, C. E.,
Lecturer on Equity Pleading.

RALPH KNEELAND JONES, B. S.,
Librarian.

The School of Law was opened to students in 1898. It occupies rooms in the Exchange Building, at the corner of State and Exchange streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The library of the school contains about twenty-five hundred volumes, including full sets of the reports of the Supreme Courts of the United States, Maine, Massachusetts, New Hampshire, Vermont, Connecticut, Rhode Island, and Ohio; the reports of the Court of Appeals of New York; the American Decisions, American Reports, American State Reports; the Lawyers' Annotated Reports; the leading text-books, and the leading periodicals.

ADMISSION.

Graduates of any college or satisfactory preparatory school are admitted to the school as candidates for the degree of Bachelor of Laws without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case, on a consideration of its merits.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other law schools of good standing are admitted to classes in this school corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state are admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws.

METHODS OF INSTRUCTION.

The school is not committed exclusively to any one method of instruction, and recognizes the value of lectures by able men, and the profit to be found in the use of standard text-books, but the great stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is

believed that through the case the student can best come at and comprehend the controlling principles of the law, and that in no other way can he get so firm a grip and so vital a comprehension of them. "Through the case to the principle," may perhaps adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the school, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs, summarizing the points involved and the authorities cited, are submitted to the presiding judge. During the present year members of the Penobscot Bar have served in the capacity of judge, and it is expected that their services may be secured hereafter. Jury trials are frequently held, the records of recent cases actually tried before the Supreme Court sitting at *nisi prius* being used for that purpose.

The aim and spirit of the school are eminently practical, the purpose being to equip men for the every day duties of the practicing attorney.

COURSE OF STUDY.

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. College graduates, however, may be able to complete the course in two years. The school year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms of eleven, ten, and eleven weeks respectively.

EXPENSES.

The tuition fee is \$60. The graduation fee is \$10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from \$3 to \$7 a week. In other parts of the city lower rates may be obtained. It is believed that expenses in this, as well as in other departments of the University, are lower than in any other college of New England.

DEGREES.

Upon the completion of the course, the degree of Bachelor of Laws is conferred. The degree of Master of Laws will be granted for one year of graduate study.

MILITARY INSTRUCTION.

Military instruction is required by law. The department is under the charge of an officer of the regular army, detailed by the President of the United States for this purpose. Cadet rifles, ammunition, and accoutrements are furnished by the War Department. The course has special reference to the duties of officers of the line. The students are organized into an infantry batallion of four companies, an artillery company, band, and signal corps, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States.

The trustees have prescribed a uniform consisting of dark blue blouse, with State of Maine buttons, and gold braid on the cuffs; light blue cloth trousers for cold weather, and white duck trousers for hot weather; blue cap with gold wreath ornament. Students are required to wear their uniforms during military exercises, and are allowed to do so at other times. Students must purchase uniforms subject to the approval of the military instructor, who is required to see that the quality and fit are satisfactory. The prices for the year ending November 30, 1898, were as follows: blouse \$7.00; cloth trousers \$5.00; three pairs of duck trousers \$3.00; cap \$1.50; three pairs of gloves 60c.; three belts 30c.; total, \$17.40.

The three seniors who attain the highest standing in the military department are reported to the Adjutant General of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

Service in the military department is optional for members of the senior class who have not received appointments as officers.

SCHOLARSHIP HONORS.

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average standing, after the freshman year, of ninety on a scale of one hundred. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations or an equivalent. The methods of work are determined by the instructor. The list of honor courses, with full description, is published by the secretary of the faculty four weeks before commencement. Honor courses are open to juniors and seniors who have attained an average standing of eighty per cent. in all previous work, and an average standing of ninety per cent. in the previous work of the department in which the honors are sought. A student cannot register for an honor course without the consent of the faculty, nor later than the fourth week of the fall term. Upon completion of a course, the student's work will be tested by an examination or thesis, under the direction of the faculty committee on honor courses, and the result, together with the instructor's report, will be laid before the faculty. The faculty may grant special honors to those students who receive the approval of the committee, but will not do so if the general work is unsatisfactory. Honors, and their nature, are stated upon the commencement program and published in the annual catalogue.

PUBLIC WORSHIP.

Religious services of a simple character are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association, are held weekly.

GENERAL REGULATIONS.

The regulations in regard to the selection of studies, standings and grades, absences from recitations and examinations, rhetorical exercises, entrance conditions, leaves of absence, attendance upon church and chapel, penalties, examinations, and athletics, are printed in full and may be obtained upon application to the President of the University.

By these regulations, the quota of regular studies for each student is, for a minimum, fifteen hours, and, for a maximum, twenty hours of class room work each week. In the application of this rule, two hours of laboratory work or of other exercises not requiring preparation, count as one hour.

Excuses for absence from individual exercises are not required. Each student is expected to be present at all recitations and other exercises except when imperative reasons require absence. Of these reasons he is the judge, but a student who is absent from ten per cent. or more of the exercises in any study is not admitted to the final examination. A student who fails to pass at an examination, is absent from an examination, or is excluded from an examination, may make up his deficiency at the special examinations held at the times noted in the calendar. The arrearage examinations during the Christmas recess include only studies of the spring term; the examinations during the Easter recess include only studies of the fall term; the examinations at the beginning of the fall term include studies of the whole year. A student who fails to make up an arrearage before the study is again taken in class is required to attend recitations in that study.

Each student is given a report of his work shortly after the close of each term. Parents or guardians may obtain these reports from the Secretary upon application.

STUDENT EXPENSES.

Many students go through college for an annual expenditure of a little more than \$200, exclusive of the expense of clothing, traveling and vacations, and very many earn a part of this sum by vacation work. An estimate of the necessary annual expenses of a student in any department, except the School of Law, may be made from the following table. For the expenses of students in the School of Law, reference is made to the article on that School. It should be noticed that clothing, traveling, vacation, society, and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in Oak Hall and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses. The expenses of the first year are higher than those of later years.

ANNUAL STUDENT EXPENSE.

Tuition, 2 terms at \$15.00,.....	\$30 00
Registration fee, 2 terms at \$5.00,.....	10 00
Incidentals, 2 terms at \$10.00,.....	20 00
Laboratory fees, average, about,.....	8 00
Text-books, about,.....	15 00
Board, 34 weeks at \$3.00,.....	102 00
Heat and light for half room, and general care of dormitory, about,.....	15 00
Total,	\$200 00

The tuition charge is \$15.00 a term, or \$30.00 a year, and all students are subject to this charge except those in the short winter courses in agriculture, for which no tuition charge is

made. Residents of Maine who need assistance and maintain a good record may obtain from the University loans to cover the tuition charge. The regulations in regard to these loans are stated in the article on loans, page 101.

The registration fee of \$5.00 must be paid before the student enters any classes, at the beginning of each term.

The incidental fee is \$10.00 a term, or \$20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

The cost of text-books will average almost exactly \$15.00 a year for the course. These may be bought from the librarian at cost, but must be paid for on delivery. The expense can be decreased by buying second-hand books and selling them when used.

Students in the laboratories and shops pay a charge, to cover cost of materials and maintenance. These charges are as follows:—botany, per term, \$1.00; chemistry, per term, about \$3.00; bacteriology, per course, \$3.00; physics, per course, \$3.50; pharmacy, per term, about \$3.50; mineralogy, \$2.00; natural history, per course, \$2.00; electrical engineering, per course, \$5.00, shop, per course, \$5.00. Laboratory charges in the civil engineering course are very few, but traveling expenses in visiting engineering works will be nearly equivalent to the laboratory expenses of other courses.

The largest item of expense is for board. At the Commons, the university boarding house, each student pays his share of the cost, varying from \$2.75 to \$3.00 a week. Board may be obtained in clubs or private families at prices ranging from \$3.00 to \$3.25 a week.

Rooms in Oak Hall, the men's dormitory, are free, but students supply their own furniture, and pay for heat and light, for the lighting and care of the halls and public rooms of the dormitory, and for damages. This charge may be expected to be about \$15.00 a year, for each student, when two occupy a room. Furnished rooms, with light and heat, may be obtained in the village for \$1.50 a week, if occupied by one person, or \$2.00 a week, if occupied by two persons.

The estimate for furniture is made on the assumption that two students will unite in furnishing a room, and that something will be realized from the sale of furniture upon graduation.

Women students who do not live at their own homes are required to room and board at the Mt. Vernon House. The charge for board is \$3.00 a week. No charge is made for the rent of rooms, but students provide their own furniture, take care of their rooms, pay for the heat and light of their rooms, and for the heat, light and care of the halls and public rooms. The charge for all these items is at cost. Students are charged for all damages done to university property or to that of other students.

Each student is required to deposit with the Treasurer, a bond, with two good names as sureties, in the amount of \$150.00, to cover term bills. Blanks on which bonds should be made out will be furnished by the Secretary upon application. Those who keep a sufficient deposit with the Treasurer to cover the bills of one term, will not be required to furnish a bond. The deposit required is \$90.00 from those who board at the Commons or Mt. Vernon House, and \$30.00 from others. No student will be graduated who is in debt to the treasury.

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self help, may be obtained upon application.

LOANS.

TUITION LOANS.

Residents of Maine who need assistance and maintain a satisfactory record may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the School of Law.

Borrowers are required to give endorsed notes or other satisfactory security. The loans bear interest at six per cent per annum, and are due \$30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the faculty is accepted as an endorser.

Loans are granted by a committee consisting of the President and two other members of the faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in June preceding. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall term. Applications should be made not later than October 10. They must be made to the President upon blanks to be obtained from the Secretary of the faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans, by October 10.

THE KITTREDGE LOAN FUND.

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge of Bangor. It is in the control of the President and Treasurer of the University, by whom it is loaned to needy students. In the deed of gift, it was prescribed that no security but personal notes bearing interest at the prevailing rate, should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES.

THE KIDDER SCHOLARSHIP.—The Kidder Scholarship was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University in the class of 1870, to be awarded to a member of the junior class to be selected by the President and the Faculty.

THE PRENTISS PRIZE, the gift of Mrs. Henry E. Prentiss, Bangor, will be awarded to that member of the junior class who

shall present the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

THE PRENTISS DECLAMATION PRIZE, the gift of Mrs. Henry E. Prentiss, Bangor, for excellence in elocution, will be awarded to the best speaker in the sophomore class.

THE LIBBEY PRIZE, the gift of the Hon. Samuel Libbey, Orono, will be awarded to the student who shall present the best essay upon an agricultural topic. The essays must be handed to the Professor of Agriculture on or before the first Monday in June.

THE WALTER VALENTINE PRIZE, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., a graduate of the University in the class of 1874, will be awarded to that member of the junior class who shall excel in biological chemistry.

THE KENNEBEC COUNTY PRIZE, the gift of the Hon. William T. Haines, Waterville, a graduate of the University in the class of 1876, will be awarded to that member of the senior class who shall write the best essay on applied electricity.

THE FRANKLIN DANFORTH PRIZE, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University in the class of 1877, in memory of his father, Franklin Danforth, will be awarded to that member of the senior class in the agricultural course who shall attain the highest standing.

LOCATION.

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, a branch of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The Bangor, Orono and Oldtown Electric Railroad, runs through the university grounds. Visitors will find it convenient

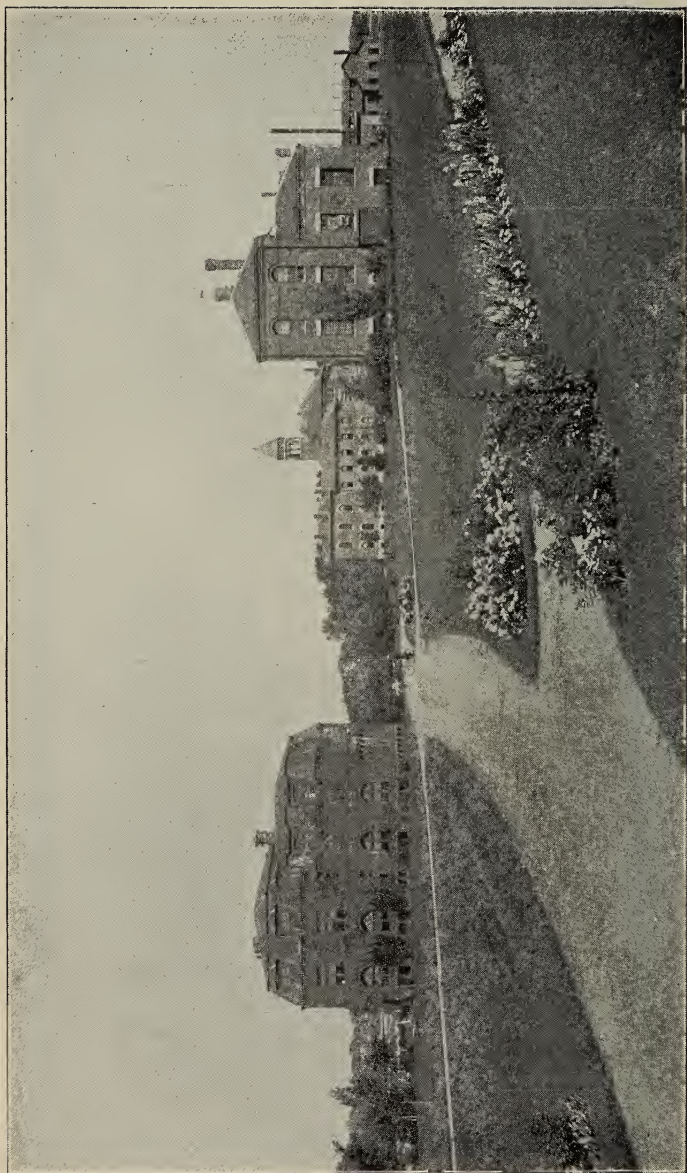
to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by railroad.

The School of Law is located in the Exchange Building, Bangor, at the corner of Exchange and State streets.

THE BUILDINGS AND THEIR EQUIPMENT.

WINGATE HALL.—The most conspicuous building on the campus, Wingate Hall, named in honor of William P. Wingate of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a handsome clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied in part by other departments. On the ground floor are two large designing rooms, recitation rooms, armory, instrument rooms, and private offices for the professors of civil and mechanical engineering. On the second floor are the offices and recitation rooms of the professors of mathematics, physics, Greek, and Latin, the physical laboratory, and the apparatus room. On the third floor are large, well lighted drawing rooms. In the basement are the dynamo laboratory, and the testing room of the department of civil engineering. The testing room contains a Riehle testing machine of 60,000 pounds capacity, cement testing machine, etc. The dynamo laboratory is provided with six direct-current dynamos, two alternating-current dynamos, a rotary converter, transformers, ammeters, voltmeters, wattmeters, rheostats, switches, etc., affording accommodations for fifteen students in a section.

OAK HALL.—North of Wingate Hall is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak of Garland, for many years a useful member of the board of trustees. It contains forty-nine study rooms for students, bath rooms, and a room occupied by the Young Men's Christian Association, is heated by steam, supplied with water, and lighted by electricity. It was remodeled in 1895.



.VIEW OF THE CAMPUS.

FERNALD HALL.—This building, named in honor of Merritt C. Fernald, Ph. D., president of the University from 1879 to 1893, is a two-story brick building, situated south of Wingate Hall. It contains fifteen rooms devoted to the departments of chemistry and pharmacy. On the first floor are the quantitative and pharmaceutical laboratories, office and private laboratories for the professors of chemistry and pharmacy; upon the second floor are the lecture rooms, the qualitative laboratory, the office and private laboratory of the instructor in qualitative analysis, a store room, and a recitation room. Under the roof are arranged the photographic studio, laboratory, and dark rooms. In the basement is an assay laboratory, the laboratory for beginners, and store rooms. The department is well supplied with apparatus.

COBURN HALL.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. On the first floor are located the reading room and the library, the laboratory and recitation room of the professor of agriculture, and the recitation room of the professor of English. On the second floor are the botanical and entomological laboratories, and recitation rooms for the departments of natural history, civics, and modern languages. Over the library is the museum, extending through two stories. The collections are large and constantly increasing. On the third floor is the chapel. In the basement is the President's office.

THE OBSERVATORY.—The astronomical observatory stands upon a slight elevation to the east of Coburn Hall. The equatorial room will, before the beginning of the next college year, be equipped with a seven and one-half inch refractor of the best modern construction with finding circles, driving-clock, filar micrometer and other accessories. In the transit-room is a Repsold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction in both descriptive and practical astronomy.

THE MACHINE SHOP.—In the rear of Fernald Hall is the machine shop, a wooden building 125 feet long and two stories

high, containing the foundry, forge shop, carpenter shop, machine shop and tool room. The building is thoroughly equipped. An adjoining building, 30 by 57 feet, contains the dynamos, motors and storage battery, which operate the lighting plant, and serve the seniors for study in their technical work in electrical engineering.

THE EXPERIMENT STATION BUILDING.—South of the Machine Shop stands a two-story brick building with basement, which is occupied by the Agricultural Experiment Station. In the basement are rooms for the storage and preparation of samples for analysis, and the boiler room. On the ground floor are the chemists' office, reagent room, the laboratory used in the analysis of foods and feeding stuffs, the nitrogen room, and the laboratory used in the analysis of fertilizers. On the second floor are the general office, the director's office, the bacteriological laboratory, the journal room, and a storage room for books and pamphlets. The building is heated by steam, supplied with gas and electricity, and thoroughly equipped with apparatus.

THE HORTICULTURAL BUILDING.—East of the Experiment Station is the Horticultural Building, consisting of a head house and three greenhouses. In the head house are the office of the professor of horticulture, a work room, a seed storage room, a photographing room, the janitor's room, and a room used for storage. The main greenhouse, 20 feet by 100 feet, is devoted to the use of the Experiment Station, and to the instruction of students. A second structure, 20 feet by 80 feet, running parallel to the main greenhouse, is divided, one-half being used for growing plants, and the remainder as a potting and storage room. The third greenhouse is designed for investigations in plant nutrition. In the south end of this house is the conservatory.

THE DAIRY BUILDING.—The Dairy Building, 50 feet by 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, the office of the professor of animal industry, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is heated with steam and supplied with hot and cold water. Power is furnished by a 6-horse power engine.

THE MT. VERNON HOUSE.—This is a wooden building, completed in 1898, to furnish dormitory accommodations for women. It is at present occupied in part by members of the faculty, but will be entirely devoted to women, whenever the numbers demand it. The house is situated near the recitation and laboratory buildings, upon a site overlooking the campus, and commanding a magnificent view of the river, villages, and mountains. It is two stories in height, built in the old colonial style, and consists of a long central portion and two wings. It contains parlor, dining room, kitchen, bath room, and sixteen study rooms, each intended for two students. The rooms are large, well lighted, heated by a combined system of hot air and hot water, and provided with electric lights from the university plant. A special feature is the long hall on each floor, extending sixty-six feet upon the front of the building, wide enough to serve as assembly or study rooms. The building, and the students who live in it, are under the supervision of a competent matron.

THE FRATERNITY HOUSES.—Four of the student fraternities occupy club houses. Three of the houses are on the campus, and one in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. Three of the fraternities maintain their own boarding establishments under the supervision of matrons.

OTHER BUILDINGS.—In addition to the buildings already described, there are six others devoted to various purposes. Among these are the President's house, the Commons or general boarding house, and three residences occupied by members of the faculty.

LIBRARY AND READING ROOM.

The library contains over sixteen thousand bound volumes, and about seven thousand pamphlets. The growth of the library is about two thousand volumes a year.

A large and convenient reading room adjoins the book room. The principal daily and weekly newspapers and about two hun-

dred and twenty-five of the most important literary, scientific, and technical papers, magazines, and reviews, both American and foreign, are kept on file.

The library is open for eight hours daily, except Sunday. Students are allowed direct access to the shelves. Students may have two books each at a time, to be kept two weeks, when they may be renewed, unless some one else has filed an application for them. There is a fine of two cents a day for books kept over time. If additional books are needed for special work they may be obtained upon application to the librarian.

MUSEUM AND HERBARIUM.

The museum is located in two stories of the wing of Coburn Hall. In the upper story are exhibited the mineral collection, geological specimens and plant models. The mineral cabinet embraces a general collection of three hundred species of the more common minerals, arranged for study according to Dana's system. A fine collection of economic minerals has been received from the National Museum; and an educational series of rocks, from the U. S. Geological Survey. The geological cabinet embraces a collection of plant and animal fossils, and a collection of the more important fragmental, crystalline, and volcanic rocks.

On the lower floor are collections of the vertebrate and invertebrate animals, and a set of animal models. The invertebrates include working collections and interesting native and exotic exhibition specimens of sponges, hydroids, corals, echinoderms, vermes, mollusks, crustaceans, and insects. The vertebrates include the nucleus of a collection of the fishes, reptiles, birds, and mammals of the State, and a set of type exotic mammals. The collection of animal models embraces a human manikin, the human eye, ear, and larynx, an insect, leach, snail, fish, snake, and bird.

The herbarium comprises the original collection of Maine plants of about 500 species; the new collection of Maine plants of 800 species; the Blake herbarium of 7,000 species, including phænogams and cryptogams; Ellis and Everhard's North American Fungi, comprising thirty-five centuries; Halsted's Lichens of New England; Underwood's Hepaticæ; Cummings and Seymour's North American Lichens; Cook's Illustrative Fungi; Collins's Algæ of the Maine Coast; a collection of illustrative cryptogams in boxes; Harvey's Weeds and Forage Plants of Maine, of 300 species; Halsted's Weeds; a collection of grasses and forage plants of 400 species; a collection of United States woods prepared by the United States Department of Agriculture; a collection of seeds and fruits; numerous slides for the microscope.

FIELD DAY.

One day in each year, usually the last Wednesday in May, is known as the Field Day of the agricultural departments. The usual exercises are omitted and all departments are thrown open to visitors. Special effort is made to exhibit the facilities of the agricultural departments in the most thorough manner. Special railroad rates are obtained for those who come from a distance. The attendance has ranged from twelve hundred to seventeen hundred persons. The program includes informal addresses by members of the faculty in regard to the collections, demonstrations with some of the more important apparatus, exhibitions of improved agricultural machinery, the operation of the dairy apparatus, an exhibit of agricultural products, tools and supplies contributed by manufacturers and dealers. The experimental work of the Experiment Station is explained by the investigators. The students give an exhibition drill.

Circulars in regard to Field Day may be obtained by addressing the Professor of Agriculture.

ORGANIZATIONS.

FRATERNITIES.—The following fraternities are represented in the University: $\Phi \Gamma \Delta$, $\beta \Theta \Pi$, $K \Sigma$, $A T \Omega$, $\Phi K \Sigma$, ΔP , $I \Phi$, $\Phi \Gamma$ (for women).

ASSOCIATIONS.—The following is a list of other organizations existing in the University: Scientific Association, Philological Club, French Club, Debating Society, Electrical Society, Honorary Society (Phi Kappa Phi), Young Men's Christian Association, Athletic Association, Publishing Association, Press Club, Glee Club, Instrumental Club, Orchestra, Band, Photographic Society.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION.—The Young Men's Christian Association, composed of students, has for its object the promotion of Christian fellowship and aggressive Christian work.

THE HONORARY SOCIETY.—The Phi Kappa Phi is an honorary society. At the end of the junior year the five members of the class having the highest standing are elected members, and at the end of the fall term of the senior year the five next highest are added.

UNIVERSITY PUBLICATIONS.

THE ANNUAL CATALOGUE OF THE UNIVERSITY OF MAINE.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

THE SHORT CATALOGUE OF THE UNIVERSITY OF MAINE.—This is an abbreviated form of the catalogue.

THE ANNUAL REPORT OF THE TRUSTEES, PRESIDENT, AND TREASURER, TO THE GOVERNOR AND COUNCIL OF THE STATE.—The reports of the Trustees and President include an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalogue of graduates.

THE UNIVERSITY BULLETINS.—These are occasional publications containing reports of the investigations or researches made by the university officers, or other information of public interest relating to the University.

THE UNIVERSITY CIRCULARS.—These are occasional pamphlets, issued for special purposes. Those now ready for distribution relate to: The Courses in Agriculture; the Courses in Pharmacy; the School of Law; the Courses in Engineering; Student Expenses.

THE MAINE BULLETIN.—This is a small publication issued quarterly by the University, to give information to the alumni.

THE ANNUAL REPORT OF THE EXPERIMENT STATION.—This is Part II of the Annual Report of the University.

THE EXPERIMENT STATION BULLETINS.—These are popular accounts of the results of station work which relate directly to farm practice.

THE CAMPUS.—This is a journal published semi-monthly during the university year by an association of the students.

THE PRISM.—This is an illustrated annual, published by the junior class.

THE ALUMNI.

THE GENERAL ALUMNI ASSOCIATION.

George H. Hamlin, President, Orono.

Charles P. Weston, Recording Secretary, Orono.

Ralph K. Jones, Corresponding Secretary, Orono.

Albert H. Brown, Treasurer, Oldtown.

Prof. James N. Hart, Necrologist, Orono.

LOCAL ASSOCIATIONS.

THE WEST MAINE ASSOCIATION.—S. W. Bates, Esq., First National Bank Building, Portland, President; C. S. Webster, Exchange St., Portland, Secretary.

THE NORTH MAINE ASSOCIATION.—Harvey B. Thayer, Presque Isle, President; N. H. Martin, Fort Fairfield, Secretary.

THE BOSTON ASSOCIATION.—Hon. L. C. Southard, 73 Tremont St., President; J. D. Lazell, 443 Tremont Building, Secretary.

THE NEW YORK ASSOCIATION.—J. Fred Lockwood, 71 Broadway, President; C. H. Kilbourne, 2254 Seventh Ave., Secretary.

THE WASHINGTON (D. C.) ASSOCIATION.—Prof. F. Lamson-Scribner, Department of Agriculture, President; Dr. George P. Merrill, National Museum, Secretary.

THE PENOBSCOT VALLEY ASSOCIATION.—J. M. Oak, Bangor, President; E. H. Kelley, Bangor, Secretary.

COMMENCEMENT.

The Commencement exercises of 1899 were as follows:—

Saturday, June 10: Junior Exhibition.

Sunday, June 11: Baccalaureate Sermon, by Rev. S. C. Beach, Bangor.

Monday, June 12: College Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day Exercises; Memorial Services.

Tuesday, June 13: Exhibition Drill; Receptions by the Fraternities; President's Reception.

Wednesday, June 14: Commencement Exercises; Commencement Dinner; Meeting of the Alumni Association; Commencement Concert.

CERTIFICATES AND DEGREES.

A certificate was presented, upon completing the Short Course in Pharmacy, to:

William Bryant Webster, Coventry, Vt.

The Bachelor's degree was conferred upon the following persons:

Eben Pierce Bassett, B. M. E., (in Electricity), Bangor.

Frank Lothrop Batchelder, B. C. E., Machias.

Wallace Edward Belcher, B. C. E., Plymouth, Mass.

Charles Elbert Blackwell, B. M. E., (in Electricity), Madison.

Alson Edwin Boynton, B. C. E., Alna.

John Wilson Brown, B. M. E., (in Electricity), Brimfield, Mass.

Rufus Houdlette Carlton, B. M. E., (in Electricity), Cedar Grove.

Winfield Benson Caswell, B. M. E., Waterville.

- Harold Hayward Clark, B. M. E., (in Electricity), Ellsworth.
- Daniel Lunt Cleaves, B. S., (in Chemistry), Portland.
- George Collins, B. C. E., Athol, Mass.
- Cyrenius Walter Crockett, B. S., (in Chemistry), Rockland.
- Marshall Buckland Downing, B. M. E., (in Electricity), Dover.
- Irving Harry Drew, B. M. E., (in Electricity), Bar Harbor.
- Reginald Lovejoy Fernald, B. S., Orono.
- Bert Whitaker Flint, B. C. E., Bangor.
- Leonard Harris Ford, B. S., Bangor.
- Archer Lewis Grover, B. M. E., (in Electricity), Bethel.
- William Wallace Haney, B. M. E., (in Electricity), Eastport.
- George Woodman Hersey, B. M. E., Portland.
- Harry Sanford Heyer, B. M. E., (in Electricity), Friendship.
- George Libby Hilton, B. S., (in Pharmacy), Bradley.
- Hall Farrington Hoxie, B. M. E., (in Electricity), Waterville.
- Edward Raymond Mansfield, B. S., (in Agriculture), Orono.
- Herbert Palmer Mayo, B. M. E., South Boston, Mass.
- William Bradley Morell, B. M. E., (in Electricity), Amherst, Mass.
- Walter Jean Morrill, B. S., (in Preparatory Medicine), Madison.
- Edwin St. Elmo Mosher, B. M. E., (in Electricity), Presque Isle.
- William Augustine Murray, B. C. E., Pittsfield.
- William Nelson, B. M. E., Cumberland Centre.
- Herman Henry Oswald, B. M. E., (in Electricity), Philadelphia, Pa.
- Edward Everett Palmer, B. M. E., (in Electricity), South Bridgton.
- Maurice Henry Powell, B. S., (in Agriculture), Orono.
- Mildred Louise Powell, B. S., Orono.
- Joseph Henry Pretto, B. M. E., Orono.
- Stanley Sidensparker, B. M. E., Warren.
- Clinton Leander Small, B. S., (in Chemistry), Auburn.
- Edwin Melcher Smith, B. M. E., Gardiner.
- Allen Whitmore Stephens, B. C. E., Oldtown.

Frank Minott Stinson, B. M. E., Bath.
Oliver Otis Stover, B. S., Freeport.
John Henry Swain, B. S., Skowhegan.
Pearl Clayton Swain, B. A., Solon.
Marcellus Maurice Veazie, B. S., Islesboro.
Charles Comfort Whittier, B. C. E., Skowhegan.

The degree of Bachelor of Laws was conferred upon:

Frank Devereux Fenderson, East Parsonsfield.
Herbert Lewis Graham, Bar Harbor.
Laurence Vincent McGill, East Rochester, N. H.

The degree of Graduate in Pharmacy, upon presentation of a satisfactory thesis, and proof of three years' professional work in addition to the Short Course in Pharmacy, was conferred upon:

Albert James Nute, Arlington, Mass.

The degree of Civil Engineering was conferred upon the following persons, upon presentation of satisfactory theses, and proof of professional work extending over a period of not less than three years:

Charles Partridge Weston, B. C. E., Orono, class of 1896.
Frank Elwin Weymouth, B. C. E., Greytown, Nicaragua,
class of 1896.

The honorary degree of Master of Science was conferred upon:

Samuel Lane Boardman, Augusta.

The various prizes were awarded last year as follows:

The Kidder Scholarship to Mowry Ross, West Woodstock, Conn.

The Prentiss Prize to Frank McDonald, Portland.

The Prentiss Declamation Prize to Alson Haven Robinson, Orono.

The Libbey Prize to Wallace Edward Belcher, Plymouth, Mass.

The Walter Balentine Prize to William Bryant Webster, Coventry, Vt.

The Algebra Prize to Walter Hampton Eldridge, Bucksport.

The Kennebec County Prize to Hall Farrington Hóxie, Waterville.

The Franklin Danforth Prize to Edward Raymond Mansfield, Orono.

APPOINTMENTS.

SPEAKERS AT COMMENCEMENT, JUNE, 1899.

Marshall Buckland Downing, Dover; Reginald Lovejoy Fernald, Orono; Herman Henry Oswald, Philadelphia, Pa.; Stanley Sidensparker, Warren; Clinton Leander Small, Auburn; Pearl Clayton Swain, Solon.

SPEAKERS AT THE JUNIOR EXHIBITION, JUNE, 1899.

Roy Huntley Brown, Montague City, Mass.; Walter Neal Cargill, Liberty; Charles Hutchinson Lombard, Portland; Frank McDonald, Portland; Fred Carlton Mitchell, West Newfield; DeForest Henry Perkins, North Brooksville; Charles Omer Porter, Cumberland Mills; Joseph Onon Whitcomb, Morrill.

SPEAKERS AT THE SOPHOMORE PRIZE DECLAMATION CONTEST,
DECEMBER, 1898.

Wales Rogers Bartlett, Center Montville; Gertrude Lee Fraser, Oldtown; LeRoy Harris Harvey, Orono; Bertrand Clifford Martin, Fort Fairfield; Maurice Barnaby Merrill, Stillwater; Alson Haven Robinson, Orono; Frank Erwin Watts, West Falmouth.

REPORTED TO THE ADJUTANT GENERAL OF THE U. S. ARMY.

Clinton Leander Small, Portland; Charles Comfort Whittier, Skowhegan; Frank Lothrop Batchelder, Machias.

MEMBERS OF PHI KAPPA PHI.

Frank Lothrop Batchelder, Machias; Wallace Edward Belcher, Plymouth, Mass.; John Wilson Brown, Brimfield, Mass.; Marshall Buckland Downing, Dover; Reginald Lovejoy Fernald, Orono; Herman Henry Oswald, Philadelphia, Pa.; Stanley Sidensparker, Warren; Clinton Leander Small, Auburn; Allen Whitmore Stephens, Oldtown; Pearl Clayton Swain, Solon.

STUDENTS RECEIVING GENERAL HONORS.

Wallace Edward Belcher, Plymouth, Mass.; Harold Hayward Clark, Ellsworth; Daniel Lunt Cleaves, Portland; Reginald Lovejoy Fernald, Orono; Herman Henry Oswald, Philadelphia, Pa.; Stanley Sidensparker, Warren; Clinton Leander Small, Auburn; Pearl Clayton Swain, Solon.

STUDENTS RECEIVING SPECIAL HONORS.

SENIORS.

Frank Lothrop Batchelder, Machias, Hydraulic Engineering.
Wallace Edward Belcher, Plymouth, Mass., Hydraulic Engineering and Physics.
Bert Whitaker Flint, Bangor, Hydraulic Engineering.
Stanley Sidensparker, Warren, Mathematics.
Allen Whitmore Stephens, Oldtown, Hydraulic Engineering.
Pearl Clayton Swain, Solon, Latin.
Oliver Otis Stover, Freeport, Zoology.

JUNIORS.

Charles Hutchinson Lombard, Portland, Mathematics.
Benjamin Thomas Weston, Madison, Mathematics.

OFFICERS OF THE CADET CORPS.

Instructor Perley Walker, Commanding.

GENERAL STAFF.

First Lieutenant and General Staff Officer—Frank McDonald.
First Lieutenant and Chief Signal Officer—Julian Sturdevant Dunn.
First Lieutenant and Quartermaster—Clinton Llewellyn Cole.

FIELD AND STAFF.

Major—Charles Omer Porter.
First Lieutenant and Adjutant—Frank Harvey Bowerman.

NON-COMMISSIONED STAFF.

Sergeant Major—Bertrand Clifford Martin.
Quartermaster Sergeant—Fred Merrill Davis.
Color Sergeant—Lewis Goodrich Varney.

COMPANY A.

Captain.....Charles Hutchinson Lombard.
First Lieutenant.....Leo Bernard Russell.
Second Lieutenant.....Philip Ross Goodwin.
Second Lieutenant.....Howard Clinton Strout.
First Sergeant.....Walter Henry Rastall.
Sergeant.....LeRoy Harris Harvey.
Sergeant.....George Estyn Goodwin.
Sergeant.....Fred Hammond Hanson Bogart.
Sergeant.....Mowry Ross.
Corporal.....Andrew George Hamilton.
Corporal.....Percival Hildreth Mosher.
Corporal.....Arthur Elmer Silver.
Corporal.....Roy Elvert Russell.
Corporal.....James Warren Butman.

COMPANY B.

Captain.....John Gardner Lurvey.
First Lieutenant.....Roy Huntley Brown.
Second Lieutenant.....Wilfred Harold Caswell.
Second Lieutenant.....Benjamin Thomas Weston.
First Sergeant.....Fred Lewis Martin.
Sergeant.....William Harris Boardman.
Sergeant.....Wales Rogers Bartlett.
Sergeant.....Lewis Robinson Cary.
Sergeant.....Frank Holt Lowell.
Corporal.....Charles William Margesson.
Corporal.....Edwin Stanley True.
Corporal.....Walter Hampton Eldridge.
Corporal.....William Asbury Hall.
Corporal.....John Clifford Warren.

COMPANY C.

Captain.....	William Goldsbrough Jones.
First Lieutenant.....	James Arthur Hayes.
Second Lieutenant.....	Fred Carleton Mitchell.
Second Lieutenant.....	Wallace Augustus Weston.
First Sergeant.....	Ernest Lauren Watson.
Sergeant.....	Fred Albert Willard.
Sergeant.....	Herbert Henry Leonard.
Sergeant.....	Mark Jonathan Bartlett.
Sergeant.....	Warren Callamore Hall.
Corporal.....	Frank Ethelbert Pressey.
Corporal.....	Alpheus Crosby Lyon.
Corporal.....	Horace Percy Abbott.
Corporal.....	Edwin Bishop Ross.
Corporal.....	Herbert Willis Sewell.

SIGNAL CORPS.

First Lieutenant.....	Freeman Ames Smith.
Second Lieutenant.....	Percy Leroy Ricker.
First Sergeant.....	Stephen Edward Woodbury.
Corporal.....	Ralph Whittier.
Corporal.....	Luther Peck.

CATALOGUE OF STUDENTS.

GRADUATE STUDENTS.

Crathorne, Arthur Robert, B. S.	Champaign, Ill.,	Mt. Vernon [House.
Crockett, Cyrenius Walter, B. S.,	Rockland,	Mt. Vernon House.
Grover, Archer Lewis, B. M. E.,	Bethel,	Mt. Vernon House.
Murray, William Augustine, B.C.E.,	Pittsfield,	Mt. Vernon House.
Sidensparker, Stanley, B. M. E.,	Warren,	Mt. Vernon House.
Shepard, Lucius Jerry, B. S.,	Orono,	Mill Street.
Small, Clinton Leander, B. S.,	Auburn,	Mt. Vernon House.
Stover, Oliver Otis, B. S.,	Freeport,	Mt. Vernon House.

SENIORS.

Beedle, Harry Woodward,	South Gardiner,	207 Oak Hall.
Bird, Alan Laurence,	Rockland,	B. Θ. II. House.
Bowerman, Frank Harvey,	Victor, N. Y.,	B. Θ. II. House.
Burgess, William Joseph,	Calais,	Mrs. H. H. Finn.
Burnham, Agnes Rowena,	Oldtown,	Oldtown.
Cargill, Walter Neal,	Liberty,	Mr. O. T. Goodridge.
Caswell, Wilfred Harold,	Bridgton,	A. T. Ω. House.
Clark, Wilkie Collins,	Skowhegan,	Φ. Γ. Δ. House.
Closson, James Edward,	Monson, Mass.,	201 Oak Hall.
Cole, Clinton Llewellyn,	Pleasantdale,	311 Oak Hall.
Cushman, Harvey Barnes,	Rockland,	A. T. Ω. House.
Davis, Harry Ashton,	Orono,	Orono.
Drummond, Henry Frank,	Bangor,	K. Σ. House.
Dunn, Julian Sturdevant,	Cumberland,	K. Σ. House.
Eaton, Herbert Davidson,	Bangor,	Bangor.
Goodwin, Philip Ross,	Randolph,	B. Θ. II.
Gray, Charles Perley,	Oldtown,	A. T. Ω. House.



A VIEW FROM THE CAMPUS.

Hamlin, George Otis,	Orono,	K. S. House.
Hart, Malcolm Cole,	Willimantic,	Φ. Γ. Δ. House.
Hatch, Howard Andrew,	Lindenville, O.,	B. Θ. Π. House.
Hayes, James Arthur,	Randolph,	211 Oak Hall.
Hersey, Guy Alfred,	Bangor,	K. S. House.
Holley, Clifford Dyer,	Farmington,	Mrs. L. Hayes.
Horner, Leon Herbert,	Springfield, Mass.,	K. S. House.
Johnson, Frank Ortelle,	North Berwick,	Φ. Γ. Δ. House.
Jones, William Goldsbrough,	Bucksport,	Mrs. H. H. Finn.
Judge, Thomas Francis,	Biddeford,	A. T. Ω. House.
Leathers, Harry Hewes,	Bangor,	201 Oak Hall.
Lombard, Charles Hutchinson,	Portland,	205 Oak Hall.
Love, Alexander,	East Bluehill,	K. S. House.
Lurvey, John Gardner,	Portland,	205 Oak Hall.
McDonald, Frank,	Portland,	Φ. Γ. Δ. House.
Maddocks, Howard Lewis,	Skowhegan,	Φ. Γ. Δ. House.
Mann, Edwin Jonathan,	West Paris,	301 Oak Hall.
Merrill, Wilbur Louis,	East Parsonsfield,	K. S. House.
Mitchell, Fred Carleton,	West Newfield,	Φ. Γ. Δ. House.
Mitchell, Frank Henry,	Charleston,	Φ. Γ. Δ. House.
Murphy, George Ferguson,	Alewife,	203 Oak Hall.
Noyes, Frank Albert,	Berlin, N. H.,	K. S. House.
Owen, Alden Bradford,	West Pembroke,	203 Oak Hall.
Page, Arthur Southwick,	Fairfield,	211 Oak Hall.
Perkins, DeForest Henry,	North Brooksville,	111 Oak Hall.
Philoon, Daniel Lara,	Auburn,	312 Oak Hall.
Porter, Charles Omer,	Cumberland Mills,	K. S. House.
Ricker, Percy Leroy,	Westbrook,	303 Oak Hall.
Robbins, Charles Alphonso,	Patten,	Mr. J. P. Spearen.
Rollins, Clarence Herbert,	Veazie,	Veazie.
Rollins, Frank Morris,	Waterville,	A. T. Ω. House.
Russell, Leo Bernard,	Farmington,	Φ. Γ. Δ. House.
Smith, Edward Henry,	East Sullivan,	303 Oak Hall.
Smith, Freeman Ames,	Thorndike, Mass.,	K. S. House.
Snowdeal, Adah,	Augusta,	Mt. Vernon House.
Stickney, Grosvenor Wilson,	Clinton, Mass.,	301 Oak Hall.
Stowell, Clarence Warner,	Brimfield, Mass.,	202 Oak Hall.
Strange, Edward Moore,	Calais,	112 Oak Hall.

Strout, Howard Clinton,	Orono,	Mrs. Ada Strout.
Tate, Edwin Morrel,	South Corinth,	Bangor.
Tate, Fred Foy,	South Corinth,	Mr. Spaulding.
Vose, Fred Hale,	Milltown, N. B.,	B. Θ. Π. House.
Webster, Frank Elijah,	Patten,	Mr. E. Webster.
Weston, Benjamin Thomas,	Madison,	Φ. Γ. Δ. House.
Weston, Wallace Augustus,	Madison,	Φ. Γ. Δ. House.
Whitcomb, Joseph Onon,	Morrill,	111 Oak Hall.

JUNIORS.

Bartlett, Charles William,	North New Portland,	K. Σ. [House.
Bartlett, Mark Jonathan,	Montville,	Mr. Chas. Crowell.
Bartlett, Wales Rogers,	Center Montville,	209 Oak Hall.
Bennett, Waldo Horace,	Newport,	Φ. Γ. Δ. House.
Bixby, John Harold,	Anson,	309 Oak Hall.
Bixby, Oscar Merrill,	Anson,	309 Oak Hall.
Boardman, William Harris,	Calais,	Mr. H. H. Finn.
Bogart, Fred Hammond Hanson,	Chester, Conn.,	109 Oak Hall.
Brown, Arthur Fred,	Belfast,	A. T. Ω. House.
Buck, Henry Alfred,	Bucksport,	102 Oak Hall.
Buck, Thomas,	Orland,	Mr. H. H. Finn.
Cary, Lewis Robinson,	Bowdoinham,	Prof. G. M. [Gowell.
Clark, Samuel,	Waterville,	A. T. Ω. House.
Cobb, Arthur Leroy,	South Vassalboro,	Mrs. T. [Shatney.
Coombs, James Parker,	Pleasantdale,	A. T. Ω. House.
Davis, Edmund Ireland,	Bangor,	B. Θ. Π. House.
Davis, Fred Merrill,	Lewiston,	209 Oak Hall.
Davis, George Harold,	Auburn,	K. Σ. House.
Faunce, Benjamin Franklin,	Norway,	206 Oak Hall.
Fitzgerald, Elsie Eunice,	Oldtown,	Oldtown.
Fraser, Gertrude Lee,	Oldtown,	Oldtown.
Goodwin, George Estyn,	Gorham,	K. Σ. House.
Hamlin, Emily,	Orono,	Mrs. L. Hamlin.
Harvey, Clifford Dawes,	Lewiston,	Φ. Γ. Δ. House.
Harvey, Leroy Harris,	Orono,	Prof. F. L. Harvey.

Howe, Ernest Judson,	South Lancaster, Mass., [107 Oak Hall.
Hoyt, Henry Perez,	Fort Fairfield, A. T. Ω. House.
Keller, Percy Raymond,	West Rockport, A. T. Ω. House.
Leonard, Herbert Henry,	Orono, Mr. G. Leonard.
Libby, Wilbert Andrew,	Standish, 304 Oak Hall.
Linn, Robert Wilson,	Hartland, Φ. Γ. Δ. House.
Lowell, Frank Holt,	North Penobscot, Mr. O. T. [Goodridge.
Martin, Bertrand Clifford,	Fort Fairfield, Φ. Γ. Δ. House.
Martin, Fred Lewis,	Bluehill, 106 Oak Hall.
Merrill, Maurice Barnaby,	Stillwater, Stillwater.
Mitchell, Charles Augustus,	West Newfield, Φ. Γ. Δ. House.
Nickerson, Percy Lee,	Swanville, Mrs. Ada Strout.
Pritham, Harry Charles,	Freeport, 306 Oak Hall.
Robinson, Alson Haven,	Orono, Rev. P. J. Robinson.
Ross, Mowry,	West Woodstock, Conn., [Ktaadn Building.
Shaw, Scott Parker,	North Gorham, 306 Oak Hall.
Stilphen, Charles Augustus,	Dresden Mills, Mrs. T. Shatney.
Swasey, Lawrence Mabry,	Limerick, 304 Oak Hall.
Thompson, Samuel Day,	Bangor, B. Θ. Π. House.
Varney, Lewis Goodrich,	Windham Centre, K. Σ. House.
Ward, Thomas Hale,	Fryeburg, 302 Oak Hall.
Watson, Ernest Lauren,	Brunswick, 302 Oak Hall.
Watts, Frank Erwin,	West Falmouth, Stillwater.
Woodbury, Stephen Edward,	Beverly, Mass., 210 Oak Hall.
Wormell, Ralph Geddes,	Waterville, A. T. Ω. House.

SOPHOMORES.

Adams, Nathan Herbert,	Notch, Mr. J. P. Spearen.
Allen, Roy Parker,	North Sedgwick, 308 Oak Hall.
Anderson, Thomas Alexander,	Hartland, Φ. Γ. Δ. House.
Bachelder, Arthur Willis,	North Sebago, 305 Oak Hall.
Bartlett, Enoch Joseph,	Monroe, Stillwater.
Blaisdell, Melvin Merle,	Fort Fairfield, 307 Oak Hall.
Bodge, Byron Hodgkins,	Wells Beach, Φ. Γ. Δ. House.

Boland, Marion Genevieve,	Worcester, Mass., Mt. Vernon [House.
Burns, Harry Buckman,	Westbrook, 104 Oak Hall.
Bussell, Edith Mae,	Oldtown, Mt. Vernon House.
Butman, James Warren,	Readfield, A. T. O. House.
Carr, Harold Malcolm,	Sangerville, K. S. House.
Chadbourne, Henry Wilmott,	Mattawamkeag, Ktaadn Build- [ing.
Chamberlain, Charles Edward,	Wilton, Φ. Γ. Δ. House.
Chase, Nathan Ajalon,	South Paris, 212 Oak Hall.
Cimpher, Orman Taylor,	Guilford, Φ. Γ. Δ. House.
Cole, Henry Ernest,	Pleasantdale, 311 Oak Hall.
Crowell, William Henry,	Middletown, Conn., Φ. Γ. Δ. [House.
Davis, Alfred Ricker,	Auburn, K. S. House.
Davis, Samuel Prince,	Portland, B. Θ. Π. House.
Delano, Edward Warren,	Abbot Village, B. Θ. Π. House.
Duren, Harry Elwood,	Richmond, 204 Oak Hall.
Durgan, George Washington, Jr.,	Sherman Mills, 310 Oak Hall.
Dyer, William Norman,	Harrington, A. T. O. House.
Eldridge, Walter Hampton,	Bucksport, Mr. J. P. Spearen.
Elliott, Wesley Clarendon,	Patten, 112 Oak Hall.
Farrington, Herbert Oscar,	Portland, Φ. Γ. Δ. House.
Fessenden, Lothrop Edwin,	Bridgton, Mrs. C. S. Marsh.
Foster, Arthur Brookhouse,	Beverly, Mass., Mrs. C. S. Marsh.
French, Henry Carter,	Rumford Centre, Mr. E. Webster.
Gilbert, Eugene Clarence,	Orono, Mr. T. Gilbert.
Graves, William,	Presque Isle, A. T. O. House.
Greene, James Marquis,	Putnam, Conn., Φ. Γ. Δ. House.
Hall, William Asbury,	Freeport, 210 Oak Hall.
Hamilton, Andrew George,	Orono, Mr. H. Hamilton.
Hamlin, Horace Parlin,	Orono, Mrs. L. Hamlin.
Hennessy, Harold Stewart,	Bangor, B. Θ. Π. House.
Holmes, Fred Eugene,	East Machias, 202 Oak Hall.
Johnson, Elbridge Augustus,	Portland, Mrs. A. Cowan.
Kallom, Frank Winthrop,	South Berlin, Mass., A. T. O. [House.
Kelley, Burchard Valentine,	Centerville, Mass., Mayo's [Block.

Kneeland, Henry Wilton,	Searsport,	204 Oak Hall.
Knight, Perley Charles,	South Gorham,	Mr. O. T. Good- [ridge.
Knowles, Lida May,	Bangor,	Mt. Vernon House.
Larrabee, George Pearson,	Pride's Corner,	310 Oak Hall.
Lowe, Sumner Sturdivant,	Cumberland,	Mrs. A. Cowan.
Lyon, Alpheus Crosby,	Bangor,	Φ. Γ. Δ. House.
McCarthy, Patrick Edward,	Lewiston,	207 Oak Hall.
Mansfield, Harold Wilder,	Union,	Mayo's Block.
Margesson, Charles William,	Bangor,	Φ. Γ. Δ. House.
Mitchell, Ezra Getchell,	Auburn,	Φ. Γ. Δ. House.
Moore, Byron Newcomb,	Biddeford,	A. T. Ω. House.
Mosher, Percival Hildreth,	Pleasantdale,	Mayo's Block.
Packard, Harry Elton,	Guilford,	Mr. L. P. Harris.
Pease, Irving,	Bean,	Ktaadn Building.
Peck, Luther,	Monson, Mass.,	204 Oak Hall.
Pressey, Frank Ethelbert,	Bangor,	Bangor.
Rackliffe, Clinton Nathan,	Easton,	312 Oak Hall.
Rice, Marie Cecilia,	Bangor,	Mt. Vernon House.
Ross, Edwin Bishop,	Bangor,	B. Θ. Π. House.
Russell, Roy Elvert,	Livermore,	310 Oak Hall.
Sewell, Herbert Willis,	Wilton,	Φ. Γ. Δ. House.
Shaughnessy, James,	St. Stephen, N. B.,	Mr. J. P. [Spearen.
Silver, Arthur Elmer,	Silver's Mills,	Mrs. S. Gee.
Small, Silas Gilman,	Lubec,	308 Oak Hall.
Smith, Royal Holland,	Orono,	Mayo's Block.
Stephens, Charles Walter,	Oldtown,	Oldtown.
Taft, DeForest Reed,	Winchester, N. H.,	Mr. E. [Webster.
Towle, Jessie Craig,	Sherman Mills,	Miss A. Fitz- [gerald.
True, Edwin Stanley,	Portland,	B. Θ. Π. House.
Warren, John Clifford,	Westbrook,	K. Σ. House.
Watson, Alvin Morrison,	Portland,	K. Σ. House.
Webb, Arnold Stedman,	Portland,	B. Θ. Π. House.
Wheeler, Allen Francis,	Brunswick,	A. T. Ω. House.
Whittier, Ralph,	Orono,	Rev. C. Whittier.
Wilkins, Harry Fred,	Monson,	Mrs. Mary Wilson.

FRESHMEN.

Adams, John Winter,	Notch,	Mr. J. P. Spearen.
Baker, Ernest Linwood,	Deering Centre,	Mr. J. P. [Spearen.
Bean, Vernon W.,	Oldtown,	Oldtown.
Benner, Archie Ray,	Waldoboro,	Mr. O. C. Dunn.
Berry, Richard Henry,	Montville,	Mr. Chas. Crowell.
Blaisdell, Geneva,	Fort Fairfield,	Mt. Vernon [House.
Bosworth, Lewis Wellman,	Oldtown,	Oldtown.
Bradford, Luther Cary,	Turner,	B. Θ. Π. House.
Burns, William Bruce,	Fort Fairfield,	Φ. Γ. Δ. House.
Burrill, Charles Rodney,	Ellsworth,	Mr. Chas. Crowell.
Carlton, Roy Hastings,	Fryeburg,	Mrs. Robinson.
Carr, Cleora May,	Oldtown,	Oldtown.
Carr, Richard David,	Oldtown,	Oldtown.
Chandler, Robert Flint,	New Gloucester,	Φ. Γ. Δ. House.
Chesley, Lloyd Almond,	Oldtown,	Oldtown.
Coffin, Leroy Melville,	Freeport,	Mrs. L. P. Harris.
Cole, Winfield Lee,	Biddeford,	A. T. Ω. House.
Collins, Fred,	Bar Harbor,	K. Σ. House.
Conner, Ralph Melvin,	East Wilton,	Mr. J. P. Spearen.
Cooper, Ralph Leonard,	Belfast,	A. T. Ω. House.
Crabtree, Leroy Brown,	Hancock,	K. Σ. House.
Crocker, Henry Kennedy,	Rockland,	Mrs. Anson Allen.
Crowley, Elmer Bishop,	Indian River,	210 Oak Hall.
Cunningham, Pearl Garfield,	Oldtown,	A. T. Ω. House.
Davenport, Arthur Edward,	East Brimfield, Mass.,	208 Oak [Hall.
Davis, Rodney Clinton,	Lewiston,	305 Oak Hall.
Day, George Milton,	East Hiram,	Mr. J. P. Spearen.
Dean, William Robert,	Bath,	Mr. Frank Beal.
Delano, Arthur Hastings,	Dorchester, Mass.,	206 Oak Hall.
Dinsmore, Ernest LeRoy,	Whiting,	308 Oak Hall.
Dinsmore, Sanford Crosby,	Dover,	B. Θ. Π. House.
Dorticós, Carlos,	Woodfords,	K. Σ. House.
Douglass, Frank Libby,	West Gorham.	Mrs. Robinson.

Elliott, James Daniel,	Bowdoinham, Mr. J. P. Spearen.
Everett, Chester Steele,	Attleboro, Mass., Mr. Wm. [Colburn.
Fitz, Guy Bearce,	Auburn, Mr. J. Frank Beal.
Foster, Samuel Joshua,	Bingham, K. S. House.
French, Harold Francis,	East Bangor, Mr. J. A. Walton.
Gage, Arthur Willard,	Dennisport, Mass., Mr. L. P. [Harris.
Gammon, Edee Dakin,	Oldtown, Oldtown.
Goodridge, Oren Leslie,	Orono, Orono.
Goodwin, Burton Woodbury,	Berry Mills, Φ. Γ. Δ. House.
Goodwin, William Francis,	Biddeford, A. T. Ω. House.
Graves, Sherley Preston,	Northeast Harbor, Mrs. P. Wall.
Grows, Charles Sumner,	Ellsworth, Mr. James Park.
Hadlock, George Harmon,	Portland, B. Θ. Η. House.
Haines, Henry Hudson,	Chester, Mr. J. A. Walton.
Harris, Liston LeRoy,	Orono, Orono.
Harris, Philip Howard,	Portland, Mr. J. P. Spearen.
Hartford, Edward Goodnow,	Calais, Mrs. P. Wall.
Hilliard, John Heddle,	Oldtown, Φ. Γ. Δ. House.
Hinchliffe, Henry John,	Worcester, Mass., Φ. Γ. Δ. House.
Hinckley, Frances Augusta,	Oldtown, Oldtown.
Hinkley, Robert Lowell,	Gorham, K. S. House.
Howe, Clifford Rollins,	Merrimac, Mass., Mrs. S. Gee.
Ilsley, Gardner Frederick,	Wellesley Hills, Mass., Mr. Wm. [Colburn.
Jordan, Alfred Carroll,	Casco, Mr. J. P. Spearen.
Kittredge, Claude Abbott,	Farmington, Mrs. T. Shatney.
Lang, Theo. Wayne,	Bowdoinham, Mrs. L. P. Harris.
Larrabee, Benjamin True,	Cumberland Mills, K. S. House.
Leary, Thomas Edward,	East Hampden, Mr. J. P. [Spearen.
Lee, Lester Dana,	Weld, Mr. J. P. Spearen.
Lewis, Charles Wesley,	Skowhegan, Stillwater.
Libby, Hollis Willard,	Machiasport, Miss A. T. Emery.
Lord, Cecil Arthur,	Bar Harbor, Middle Street.
Loud, Warren Cornelius,	Caribou, 208 Oak Hall.
Lucas, Walter Bradford,	Whitman, Mass., Mr. L. P. [Harris.

McCready, John Hollis,	Houlton, Mr. J. A. Walton.
McCullough, Frank,	Lynn, Mass., B. O. H. House.
McNamara, Edward John,	Orono, Orono.
Maxfield, Amy Ines,	Sandypoint, Mt. Vernon House.
Merrifield, Parker Wilson,	South Lincoln, Mr. L. P. Harris.
Merrill, Erland Green,	Falmouth, Mrs. Mary Wilson.
Merrill, Ethel Myra,	Brownville, Prof. L. H. Merrill.
Merrill, Merton Allen,	Dexter, A. T. O. House.
Millay, James Frank,	Bowdoinham, Mr. L. P. Harris.
Montgomery, Carroll Leland,	Deering Centre, Mr. J. P. [Spearen.
Mullaney, Roderick Edward,	Bangor, Bangor.
Murphy, Clarence Alexander,	Mansfield, Mass., 107 Oak Hall.
Norwood, Harry Emery,	Hampden Corner, Mr. J. P. [Spearen.
Page, Arthur Given Chadbourne,	Orono, Orono.
Patrick, Stephen Edmund,	Gorham, Mrs. Byron Hackell.
Perry, Estelle M.,	North Castine, Mt. Vernon [House.
Pestell, Walter,	Lynn, Mass., Mr. O. C. Dunn.
Porter, Ernest Albee,	Eustis, K. S. House.
Puffer, Charles Loring,	Epping, Mrs. Good.
Robbins, John Lean,	Patten, Mr. J. P. Spearen.
Robinson, Veysey Hiram,	Waterville, Mrs. Robinson.
Rogers, Herbert Kemp,	Wellfleet, Mass., Mr. Fred [Abbott.
Sanford, John Foy,	Lewiston, Mr. J. A. Walton.
Sawyer, Harry Ansel,	Portland, Mr. J. P. Spearen.
Scoville, Sorensen L.,	South Ohio, N. S., Mr. J. A. [Walton.
Sheahan, Harold Vose,	Dennysville, Mr. J. P. Spearen.
Shute, Martyn Hall,	Ellsworth, Mr. James Park.
Simpson, Paul Dyer,	Sullivan, B. O. H. House.
Sinclair, Karl Augustus,	Malden, Mass., Mr. J. P. [Spearen.
Small, Eben Emmons,	East Thorndike, Stillwater.
Small, Guy Osman,	Kingfield, Mrs. Good.
Smith, Howard Ausburn,	North Truro, Mr. Fred Abbott.

Smith, Lewis Eaton,	North Reading,	Mr. Henry [Colburn.
Soper, Henry Melville,	Oldtown,	Oldtown.
Stewart, George Thomas,	Auburn,	104 Oak Hall.
Stone, Charles Wesley, Jr.,	Milo,	Milford.
Strickland, Roy Elgin,	South Paris,	212 Oak Hall.
Towse, Arthur Roy,	North Lubec,	Mr. J. P. Spearen.
Treworgy, Isaac Emery,	Surry,	109 Oak Hall.
Tucker, George Edwin,	Monson, Mass.,	204 Oak Hall.
Usher, Robert Cleveland, Jr.,	Plainville, Conn.,	K. S. House.
Wellman, Edward Francis,	Lewiston,	Φ. Γ. Δ. House.
Wharff, Edward Mansfield,	Danforth,	Mr. J. A. Walton.
White, Ralph Henry,	East Machias,	Miss A. T. Emery.
Whitney, Harvey David,	Auburn,	Φ. Γ. Δ. House.
Whitten, Eugene McLellan,	Bartlett, N. H.,	104 Oak Hall.
Wiley, Mellen Cleaveland,	Bethel,	Mr. J. P. Spearen.

SPECIALS.

Barrows, William Edward, Jr.,	Augusta,	B. Θ. Π. House.
French, Joseph Edward,	South Chesterville,	202 Oak Hall.
Kelley, Mrs. Alice H.,	Fort Fairfield,	Mt. Vernon [House.
Nichols, Mrs. Mabel Carlton,	Orono,	Mt. Vernon House.
Tolford, Arthur Roebuck,	Portland,	107 Oak Hall.

SHORT COURSES IN AGRICULTURE.

Chubbuck, Alfred Seely,	East Fairfield,	Mr. Fred Abbott.
Colcord, Allen Dodge,	West Winterport,	Mr. Fred [Abbott.
Morse, Frank Harris,	Waterford,	Mr. Fred Abbott.
Richardson, Joel,	Stetson,	Oldtown.
Wheeler, Chester,	Auburn,	Mr. Fred Abbott.
Witham, John Perley,	Upper Gloucester,	Mr. Fred [Abbott.
Wood, Joel Prescott,	Belfast,	Mr. Fred Abbott.

STUDENTS IN THE SCHOOL OF LAW.

SENIORS.

Barker, Lewis Appleton, <i>Brown University.</i>	Bangor,	292 Hammond St.
Cook, Harold Elijah,	Vassalboro,	65 Second St.
Dolan, John Frederick,	Bangor,	77 Second St.
Foss, Paul Frank,	Weston,	212 Harlow St.
Gerrish, Hiram,	Brownville,	Harlow St.
Gibbs, Bernard, B. S., <i>University of Maine.</i>	Glenburn,	210 Forest Ave.
Graton, Claude Dewing,	Burlington, Vt.,	11 Cedar St.
Hobson, Ernest Emery,	Palmer, Mass.,	50 Charles St.
Hutchings, Edward, B. A., <i>Bowdoin College.</i>	Brewer,	Brewer.
Ludgate, Verdi,	Lubec,	49 High St.
McCarthy, Matthew,	Bangor,	182 York St.
Mackay, John Daniel,	Lake Ainslie, Cape Breton,	[365 Union St.
Mills, Chester Horace,	Skowhegan,	278 Main St.
Phillips, Harold John,	Skowhegan,	Summer St.
Pierce, Howard,	Blaine,	100 Ohio St.
Price, Arthur Wellington, B. A., <i>Wesleyan University.</i>	North Waldo, Boro,	65 Summer St.]
Robinson, Agnes May,	Sherman Station,	16 Maple St.
Sargent, Walter Joseph, B. A., <i>Bowdoin College.</i>	Brewer,	Brewer.
Schwartz, Lewis Harry,	Lawrence, Mass.,	265 Main St.
Small, Frank Jackson, B. A., <i>Bowdoin College.</i>	Oldtown,	Oldtown.
Stevenson, James Bissett,	Farmington,	265 Main St.
Theriault, Dana Leo,	Caribou,	182 York St.
Thompson, Frederick Everett, B.A., <i>Brown University.</i>	Bangor,	27 Sixth St.
Waterhouse, William Henry,	Oldtown,	Oldtown.
Williams, Dana Scott,	Lewiston,	11 Cedar St.

JUNIORS.

Butterfield, Benjamin Franklin,	Weston,	212 Harlow St.
Dunn, Patrick Henry,	Brewer,	Brewer.
Foster, Nathan Grant, B. A.,	Webb,	128 Date St.

Colby College.

Higgins, Morris Prescott,	Orrington Center,	Orrington [Center.
Holmes, William Harrison,	Ellsworth,	217 State St.
Lord, Harry,	Bangor,	53 Fourth St.
O'Halloran, James,	Oldtown,	74 Jefferson St.
Plumstead, Frank, B. A.,	Wiscasset,	29 Forest Ave.

Bates College.

Ritter, George William,	Monson, Mass.,	50 Charles St.
Robinson, William Henry,	Bangor,	74 Jefferson St.
Sawyer, William McCrillis,	Bangor,	64 Forest Ave.
Seavey, Wesley Shelsea,	Orrington Center,	Orrington [Center.
Selkirk, Robert William,	Wilder, Vt.,	265 Main St.
Thurlough, Harry Harding,	Litchfield Corner,	182 York St.
Weatherbee, Albert Washington,	Bangor,	198 Broadway.
Woodcock, Ernest Melville,	Bangor,	17 Adams St.

SPECIALS.

Oliver, Charles Richard,	Bangor,	3 Park St.
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